

Mobile access

Country	Operator	Type of measure*	Description of the measure	Objective	Method of implementation (if applicable)	Number of subscribers having a subscription where this measure is implemented	How is the user informed?	Can the user activate/deactivate the measure? How?	Protection of business secret	
		User's access is blocked/throttled, e.g. after having downloaded/uploaded a certain amount of data.	<p>technical:</p> <ul style="list-style-type: none"> - Speed throttling (elimination of the maximum bandwidth after reaching the contracted data volume): 2G/3G yes (64 kbps), LTE no - Rate capping (limitation of the maximum allowed data rate according to the contracted rate): 2G/3G no, LTE yes - Session capping for 2G/3G prepaid tariffs (blocking of the data connection after reaching the contracted data volume) <p>contractual:</p> <ul style="list-style-type: none"> - 2G/3G/LTE speed throttling (limitation of the maximum data rate to 64 kbit/s (2G/3G) and 384 kbit/s (LTE) respectively after reaching the contracted data volume) - 2G/3G/LTE rate capping (limitation of the maximum allowed data rate according to the contracted rate) - 2G/3G session capping for prepaid tariffs (blocking of the data connection after reaching the contracted data volume) 	Ensuring network integrity by protection against excessive usage (ensure fair usage) and thus allowing commercially feasible tariff designs. Customer protection against "billshock".				<p>- Please see document "Contractual terms and additional information".</p> <p>- User is actively informed by SMS when reaching 90% and 100% of included highspeed volume (prepay customers are actively informed at 100%).</p> <p>- User can access information on used volume via web-site ("VodafoneCenter") and Vodafone Dashboard. In case included highspeed volume is reached customer is automatically redirected to VodafoneCenter.</p>	Yes. User can buy additional highspeed volume in case of postpay customers. Prepay customers can only buy additional volume in specific smartphone tariffs. Additional volume can be bought via SMS or via web-interface.	Method of implementation Number of subscribers
		If you offer specialized services, how does this affect the Internet access traffic on the same access	<p>technical: Vodafone's NGN-telephony service (only in stationary LTE tariffs) are prioritised higher than Internet access thus limiting available bandwidth for Internet access in case telephony is used (dynamic bandwidth allocation).</p> <p>contractual: Traffic usage for NGN-telephony is not counted within the contracted data volume.</p>	Ensure QoS for the specialized services to guarantee good end user experience.			Please see document "Contractual terms and additional information"	No	Method of implementation Number of subscribers	
		Different priority levels within Internet access traffic	<p><i>Examples of measures that depend on the type of protocol or application (mail, video, web, etc.) accessed via internet:</i></p> <p>P2P file sharing is blocked/throttled</p>	Protecting average customers against heavy users with permanent traffic and allowing commercially feasible tariff designs.	n/a			Yes. In some postpay tariffs use of P2P/VoIP/IM is allowed. In other postpay tariffs customer can purchase additional packages allowing the use of P2P/VoIP/IM. In prepay tariffs use of P2P/VoIP/IM is generally not allowed. Purchase of additional packages is possible via customer service hotline or via Vodafone shop.	Method of implementation Number of subscribers	
		VoIP is blocked/throttled	<p>technical: no blocking or throttling</p> <p>contractual: depending on customer's tariff (see means to activate/deactivate measure)</p>	Allowing commercially feasible tariff designs.	n/a		Please see document "Contractual terms and additional information".		Method of implementation Number of subscribers	
		Instant Messaging services are blocked/throttled		Allowing commercially feasible tariff designs.	n/a				Method of implementation Number of subscribers	
		Other specific kind of traffic (port, protocol, application, usage, etc) is blocked/throttled	<p>technical: no blocking or throttling</p> <p>contractual: no</p>	n/a	n/a	n/a	n/a	n/a	Method of implementation Number of subscribers	
		Specific application/content provider (e.g. website or VoIP provider) is blocked/throttled	<p>technical: no blocking or throttling</p> <p>contractual: no</p>	n/a	n/a	n/a	n/a	n/a	Method of implementation Number of subscribers	
		Specific type of over-the-top traffic given preferential treatment (e.g. specific content/application and/or specific application/content provider)	<p>technical: no preferential treatment</p> <p>contractual: no</p>	n/a	n/a	n/a	n/a	n/a	Method of implementation Number of subscribers	

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Restriction on the type of terminal allowed, or tiered pricing depending on the terminal used	technical: no blocking or throttling of tethering contractual: depending on customer's tariff	Allowing commercially feasible tariff designs.	n/a			Please see document "Contractual terms and additional information"	User can buy additional package.	
Other relevant practice	To be completed with other types of measures - add as many lines as extra practices							

Allowance of Incoming traffic	technical: In general, incoming traffic is only allowed as a response to an outgoing request. contractual: no	Ensuring network integrity and protection of users against viruses, hackers etc.				No active information.	No.	Method of implementation Number of subscribers
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Traffic Optimization	technical: Removing TCP windowing effects and compression of text, images, java script, etc. contractual: no	Optimisation of TCP protocol for usage in a mobile environment. Data reduction of internet traffic for the internal interfaces.				Yes: General information about service characteristics	Yes. User can change APN configuration, contact customer service hotline to change compression degree or customise compression degree via web-based "Performance-Manager" or via client-software "HighPerformance Client".	Method of implementation Number of subscribers
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Radio Channel Prioritization	technical: Not implemented. All data connections have the same priority. contractual: no offers	n/a	n/a	n/a	n/a	n/a	n/a	
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* If several effective measures fall in the same category, add one line per measure

Expected answer: Description of the measure, in terms of impact for the users

Reason(s) for the implementation of the measure (e.g. congestion management, network security, law enforcement, commercial terms)

How the measure is implemented (technically) and, if applicable, which conditions trigger it (e.g. threshold of data consumption). If the measure is not technically enforced, state: "N/A".

Number of subscribers to the packages where this measure is implemented

Quotation of the relevant contractual terms, plus any other type of information given to the user.

Yes' or 'No' If Yes, specify how, technically (which actions have to be taken by the user) and commercially (free/paying option).

If some information in a specific row is considered confidential, please mention precisely which parts should not be individually disclosed, and why. Reminder: in any case, all information is subject to publication, at least in a form that will be anonymous (generally aggregate).

ISP only

Country	Operator	Total number of subscribers to packages that include a mobile access to the Internet (fixed: see other tab)
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Country	Operator	Open questions regarding traffic management	Response
		What kind of application-agnostic traffic management techniques is used for e.g. congestion management	
		What technologies (e.g. DPI) are used in the network to differentiate between packets?	
		Where are these techniques implemented in the network? (e.g. close to interconnection points)	
		Are there some plans for implementing additional traffic management practices in the future?	

Country	Additional open questions
	Any additional comment

Comments on any other conditions that may impact users' ability to access the content/application of their choice