

August 2013 Fair Access Policy ("FAP") Update

The FAP has been expanded with additional information to assist all users. Traffic management criteria are now being applied by the satellite operator so it is important that you understand how and when this may impact your service and what you can do to maintain your quality of service.

Summary: What is the Fair Access Policy?

In essence, the purpose of the FAP is straightforward – to share the available satellite broadband network fairly across all customers. So, when the network is busy customers that have used lower amounts of data recently are given preference over customers that have already recently used higher levels of data. This means that the lower-use customers will see faster speeds than those customers that have already enjoyed a share of the available network and whose speeds will slow down. This seeks to ensure that the available network bandwidth is shared as fairly as possible, over time, amongst all users.

How the satellite operator chooses to measure and apply this and what the impacts are at any specific time gets a little more complicated. We have set out below (in detail) how this works. If you would rather talk to us about this, please just call 01522 692263 during working hours.

Within the detailed definitions below, Gateway of Technology is the distributor, the satellite operator is Avonline.

Managing the satellite broadband network

As the customer base grows on any spot-beam, the satellite operator needs to be more proactive in managing customer traffic (data) to ensure that, when necessary, the resources of the satellite are shared on a fair basis. As the satellite operator manages traffic more closely, more customers will now see the impacts of the FAP being applied by the satellite operator at times when the network is busiest.

As a result of recent commencement of activities of the satellite operator, we have received a number of common questions about the FAP and traffic management so we have set-out additional information below to help you.

1.1. The Fair Access Policy

The sole purpose of the FAP is to ensure that during times of heavier network usage, those customers across all packages that have used proportionately higher data than others (a "Heavy User") may see their speeds reduced to allow those with lower usage a fair opportunity to use the available system resources.

The satellite operator sets the criteria for a Heavy User and in addition they carry out all of the measurements. As an example, the measurement criteria for customer data usage may be relevant to their package profile or to other users. It also may be relevant to the time that the data was used i.e. data used during the busiest network periods may be weighted more heavily than data used when the network is quiet. The criteria current at the time that this update was prepared are shown in section 1.4. In the event that these criteria change, we will endeavour to update the website within 7 days of written notification by the satellite operator.

The application of the FAP is one part of the overall traffic management that the satellite operator manages. This allows the satellite operator the capability, at any time, to best manage the available bandwidth on any spot-beam. With multiple resellers under any one beam, this is not a company specific policy e.g. something that only applies to Gateway of Technology customers. It is applied unilaterally to all customers under the beam, irrespective of their supplier. It is up to the satellite operator to implement appropriate measures that, in their opinion, will allow them to allocate bandwidth resources on the fairest basis.

To be affected by traffic management under the FAP at any point, a Heavy User must have already used a higher level of the available network resources than most other associated customers.

1.2. Traffic management and Heavy User policies

In order to deliver fair network access, the satellite operator monitors the network usage under any spot-beam on a dynamic (real-time) basis as well as factoring historic usage patterns in order to manage the available beam bandwidth fairly across all users.

The satellite operator is solely responsible for managing the available resources most efficiently. As a result, the criteria that they set and the measures that they apply may change over time, if required - they will adapt to changing customer usage patterns.

This does mean that there are no fixed rules for determining what a Heavy User is on a permanent basis. The satellite operator will review and refine their policies over time as the customer base and the usage habits change, in order to deliver fair access to the services. Heavy User policies and measures used today may be changed by the satellite operator at any time without notice.

However, at any point in time, the satellite operator will be measuring against criteria which, based upon recent patterns allows them to specify which users are classified as Heavy Users. There may be one single Heavy User group or there may be different pools of Heavy Users linked to the volume or time that have used the network resources e.g. usage of data during peak hours may be a more important assessment criteria than usage during the daytime or overnight.

At points when the customer demand for the bandwidth is high, the satellite operator will then restrict the bandwidth available to the Heavy User group(s). In doing so, this allows those users not classified as Heavy Users reasonable opportunity to share and use the remaining bandwidth in a fair manner and maintain the best possible quality of service as measured over all users.

1.3. The impact of traffic management and heavy user groups

As covered above, the impact of traffic management and Heavy User groups is that during busy periods the Heavy Users will receive proportionately less of the available bandwidth in comparison to the other (lower data) users.

Lower data users will therefore see the best possible download and upload speeds depending upon the number of live users and way that they are using the network at that time.

The Heavy User groups will see their maximum download and upload speeds reduce. This will also be dependent upon the number of concurrent Heavy Users and the way that they are using the network at that point in time.

Since, by definition, a Heavy User has been recently assessed as a higher than average user, the transition from high bandwidth use to restricted use may result in a dramatic reduction in available speeds. During higher use periods where Heavy Users are restricted, if they do continue to seek to use higher levels of bandwidth this is done in competition with other similar Heavy Users so the speeds can slow considerably during periods of traffic management.

Traffic management is only activated by the satellite operator when they deem it necessary to do so. It does mean that whenever there is no traffic management being applied to a specific Heavy User group, all users, whether they are lower users or Heavy Users, will be sharing the available resource equally with all other users.

1.4. Heavy User criteria effective August 2013

The satellite operator has informed us that the following criteria are currently being used to identify Heavy Users:-

<u>Package</u>	<u>Data Threshold</u>	<u>Measurement Period</u>	<u>Period of Data Usage</u>
Tooway Medium	5GB	Weekly	16:00 to 23:00
Tooway Large	5GB	Weekly	16:00 to 23:00
Tooway XL	6GB	Weekly	16:00 to 23:00
Tooway XXL	10GB	Weekly	16:00 to 23:00
Tooway Absolute	60GB	3 0 days	24 hours

NB: As explained in section 1.1, the satellite operator can change the Heavy User criteria under the FAP at any time if, in their opinion, it will allow them to allocate bandwidth resources on a fairer basis.

Definitions:

Data Threshold – the data usage (total of upload and download) above which the user may be classified as a Heavy User;

Measurement Period – the historic period over which the usage of data is measured;

Period of Data Usage – the relevant time period each day that data usage is measured.

If a customer's usage exceeds the current threshold in the measurement periods shown they may be classed as Heavy User. They will remain classified as such until such time as the next reporting and measurement by the satellite operator sees them fall under the relevant threshold. The satellite operator is currently updating those threshold measured over one week on a daily basis and the 30 day measurement period is updated weekly.

As such, it is possible to move out of Heavy User classification under the Weekly measures in one or more days and out of the Tooway Absolute classification in one or more weeks as soon as the customer's usage falls under the threshold.

1.5. Gateway Absolute, unlimited data packages and traffic management

On our standard Gateway packages most services have a capped data limit each month. This means that when that data has been used within each 30 day window, the service will effectively stop (ie. have a restricted maximum download restriction of 256Kbps) until the start of the next data cycle when the monthly capped data is replenished.

Only our Gateway Absolute service has no data cap i.e. there is no contractual data limit set in the month above which the service stops. *However, the Gateway Absolute package is still subject to the FAP and so the satellite operator is able to set thresholds above which they may consider a Gateway Absolute customer to be a Heavy User in contrast to other Gateway Absolute users.*

In doing so, at times of high network usage when the satellite operator applies traffic management measures, a Gateway Absolute customer that is a Heavy User will see their service slow down when it is deprioritised against lower users, as explained above. The service and the download/upload capability does not stop and out of any traffic management periods restricted users will enjoy open access to the network the same as other users. The service remains unlimited in monthly data allocation but always subject to the FAP.

In addition, as per the table in section 1, Tooway Large, XL and XXL have unlimited night-time usage between 23:00 and 07:00. During these hours, there is no data cap for these services but all traffic is still subject to the FAP. Two points on this – even if the customer has exceeded their 30 day data cap the system will still allow unlimited overnight usage in the 23:0 to 07:00 window. Secondly, the satellite operator still has the potential to apply traffic management at any time so whilst there is no traffic management in force at present during the unlimited night-time period, if certain users are perceived to be utilising data quantities to the detriment of other users during this period, measures to control such activities may be introduced.

1.6. Consumer services vs Enterprise services

At present, the satellite operator has only introduced traffic management policies across the Tooway Consumer services. We have not been advised of any active criteria being applied to Enterprise services. However, all Enterprise service remain subject to the FAP.

What this means today is that at points of higher usage, Enterprise customers will simply be sharing the available bandwidth allocation between the number of active users. Hence, solely linked to the growing number of active Enterprise customers using a spot-beam at any one time, all concurrent users may see headline speeds reduce moving forward. At a point where a small number of heavy user Enterprise customers are reducing the overall network performance as measured across all Enterprise customers, we do expect some measures relevant to heavy user Enterprise customers to be applied.

1.7. Common Questions

What happens if I exceed my traffic usage, will I be cut off?
No, you will not be cut off but your bandwidth will be severely reduced until you start the next monthly cycle.

Can I buy more data if this happens?
Yes, you have two choices. If you think that you would be better suited with the data allowances on the next package, we can upgrade you quickly, usually on the same day that you ask us to. You will continue the period with the remaining pro-rata data allowance. Alternatively, you can purchase 1GB, 10GB and 50GB data tokens which can be added to your account at any time.

Can I check how much traffic I am using?
Yes, you can request a copy of your FAP graph from our support team or visit <http://checkportal.skylogicnet.com> if you are a customer.

How can I check what download or upload performance I am getting?
We recommend using: <http://speedprobe.skylogicnet.com> as this will show both the upload and download speed of your service and is designed to operate with a satellite broadband service which many test services are not.