

## **Understand How Hughes FAP Policy Works And How You Can Manage the FAP Policy Using the hnFAPmon Application**

The hnFAPmon application was written to monitor and manage your internet connection usage so you do not become subject to the Hughes Fair Access Policy (FAP).

It has been written, modified, improved, and changed as more and more information, studies, and user input have been received.

This document is written to provide a basic understanding of what the components are that impact monitoring and managing your Hughes usage to avoid being subject to the Fair Access Policy.

When trying to understand FAP, data allotment commonly called “the FAP bucket”, how it fills, and how it empties, it is necessary to understand four components and their interaction with each other.

**Caveat:** This description is based on published data and principles. There is a lot of data that would suggest, or bring into question, the authenticity of the published data. However, for purposes of this explanation, published data will be utilized.

In addition, where there is a question of whether one scenario or another is (most) accurate, the “safest” assumption is used. Again, the purpose here is to provide an application that will minimize the chances that you become subject to FAP.

### **Definitions**

As noted above, there are four components that must be understood to manage your computer use when considering the Hughes Fair Access Policy (FAP).

**“The Bucket”:** First there is the bucket it self. This ‘bucket’ is the amount of bandwidth (data upload and download) that Hughes will let you consume (use) in a **rolling 24 hour period**.

It is important to understand “rolling 24 hour period”. There is NO start time. There is NO stop time. The bucket is ALWAYS filling until it is full, and ALWAYS emptying, expect during the “FAP Free Period” (see the definition below), until it is empty. If the bucket is “drained”, becomes empty, you are subject to the FAP.

The rolling 24-hour period does not start at midnight. It does not start at ANY specific time. Just remember the bucket is always filling, and if you are using your computer, it is always emptying. The goal is to manage the internet connection through Hughes in such a manner that you **never completely empty the bucket** and become subject to the FAP. The hnFAPmon application has been written to assist you with that use management.



**How big is the bucket?** Or, how much water does the bucket hold? There are several bucket “sizes”. How much water (data capacity) the bucket holds depends on what service plan you have subscribed to. The “size” of the bucket is the total amount of bandwidth (data upload and download) that you are allowed to consume during that rolling 24-hour period discussed above. The bucket sizes for the various Hughes service plans are as follows:

Home	Pro	Pro Plus	Small Office	Business
200 MB	375 MB	425 MB	500 MB	1250 MB

**How much is that in real life?** Let’s calculate it using the size of a typical audio file (maybe a song) you might download. It depends on the length of the song, the file type (mp3, wav, etc.), and the quality (CD quality for example). If you look at the files you have on your computer, you will see something called “File Size”. If you see a file that says file size 5,379KB that means that file is 5.379MB. Now it is simple division.

**An Example:** If I use an average of 5MB per song that I download, and I subscribe to the home plan which has a 200 MB bucket, and I start downloading songs one right after the other, after I have downloaded about 40 songs (200MB divided by 5MB), I will have emptied my bucket and possibly be subject to FAP!

**Summary:** So before you download that new game, play a game online, or do that software update, you have to calculate what it is going to do to the bucket. Will it empty it? Will I have any bucket left?

**Refill Rate:** Along with the bucket you have a faucet filling the bucket. It is “refilling” the bucket, thus, refill rate. But notice it is NOT refilling it very fast. It is just dripping water (data capacity) into the bucket. As you use the water allotment (data capacity allotment) from the bucket (downloading that 5MB song), this faucet is slowly putting some of that 5MB back into the bucket. That is the refill rate, which again is based on your service plan.



**How fast is it putting water (data capacity) back into my bucket?** There is a significant amount of discussion, argument, and contention about what the actual refill rate is for each plan. The contention is based primarily on whether or not the refill faucet is adding water to the bucket during the “FAP Free” period (see definition below). For purposes of this discussion, we will assume that the faucet IS adding water during the “FAP Free” period. However, you can calculate it either way. So that means that water (data capacity) is slowly being added to the bucket at all times (24 hours a day).

Therefore, the “refill rate” is simple the capacity allotted to a specific service plan divided by 24 (to give you an hourly refill).

**An Example:** Let’s say I am on the home plan. My bucket has a capacity of 200MB. So if I divide that by 24, then this leaky faucet is adding 8.333MB to my bucket every hour until it is full.

**So what does that mean?** Let’s take our earlier example of downloading songs. If I download one song that is 5MB, as in the example above, and assuming my bucket was full when I started, it is going to take a little over half an hour for my bucket to refill just from downloading that one song! (5MB divided by 8.333MB).

That is a very simple example of why the hnFAPmon application was conceived. As you can see, it is not difficult to drain the bucket quickly. As stated earlier, there is a large amount of discussion regarding what the actual refill rate is, etc. The hnFAPmon application will always use the ‘safest’ calculation.

**Checkpoint:** We now have two pieces of the puzzle we are trying to manage regarding the Hughes internet connection usage. First, we have the “bucket” and how much water (data capacity) it will hold, which is determined by the service plan subscribed to. And second, we have the “refill faucet” and how much water (data capacity) it is putting back into the bucket (refill rate).



**Usage Rate:** Now we will discuss emptying the bucket. The usage rate, or how fast you can drain the water out of the bucket, is again dependant on your service plan. This faucet you have total control over. You can turn it on wide open and leave it wide open which will gush water (data capacity) out of the bucket and soon empty it. Or you can control opening and closing this faucet so you make sure the bucket always has at least a little bit of water (data capacity) left in it so you do not become subject to the Fair Access Policy.



As stated above, how much water (data capacity and speed) you can get out of the usage faucet, is based on the service plan you subscribe to. However, what your plan says is **not** the important factor. What **is** important is your **actual** usage.

This is where the hnFAPmon application comes into play again. hnFAPmon looks at the **actual** data going through your satellite modem. So the application knows exactly how much water has been drained from the bucket minute by minute.

**FAP Free Period:** As part of the Fair Access Policy, Hughes provides a period of time when you can turn the usage faucet on full blast, leave it on full blast, and it does NOT drain any capacity the bucket. This is the FAP Free period.

This “FAP Free” period is from 3AM until 6AM Eastern Time in the US. Since the application is used world-wide, it is written based on GMT.

By using any of the many tools available to control when, and how much you use your internet connection (these are commonly known as download managers), you can take advantage of this ‘free’ period to let the usage faucet run wide open without concern for becoming subject to the Fair Access Policy.

**Summary:** We have now discussed all the pertinent parts of the Fair Access Policy that a HughesNet satellite user must manage during their everyday use of this service.

The refill faucet (refill rate) that is constantly dripping water (data capacity) back into the bucket



The bucket, which contains the amount of water (data capacity) that can be used in a **24-hour rolling period.** This is based on based on the service plan subscribed to.



And the faucet that you can control, the usage faucet. This is the most important one. This one you can turn on and turn off. And this one is the one that hnFAPmon will always monitor.

hnFAPmon will help you make sure the bucket always has some water (data capacity) left in it so you do not become subject to the Fair Access Policy.

Be sure you always have the latest updates and news for hnFAPmon by visiting the development site at <http://sourceforge.net/projects/hnfapmon/>

While you are there, please consider a donation to support this effort.