



### Speed Parameters

Depending on the service received by subscribers and the speed specified in their contract, each subscriber is connected at a specified speed, and hence, considering that ADSL services are shared services, they will be able to use ADSL services.

Speed parameters are divided into “downstream” and “upstream”:

- Downstream: Speed of receiving data by the modem
- Upstream: Speed of sending data by the modem

Depending on the type of the service, the best download and upload speeds have been defined on Shatel website as follows:

See SHATEL website to check these parameters.

Having entered the website, select your service from among ART or ECO services on the menu on the left side of the page.

<b>ART</b>	<b>ECO</b>	<b>ECO-Office</b>	<b>Base</b>
------------	------------	-------------------	-------------

On the page that opens, the service type and maximum download and upload speeds in kbps (Kilobit per second) can be checked.

Service	Maximum Upload Speed	Maximum Download Speed
ART 1	128kbps	128kbps
ART 2	<b>192kbps</b>	192kbps

In order to check if you are connected to the Internet at the stated speed, you can enter the modem console and check the Up speed of the modem.

### Check speed parameters in modem

First you need to open the modem console page. Shatel supports Zyxel modems and the IP of these modems is 192.168.1.1 by default.

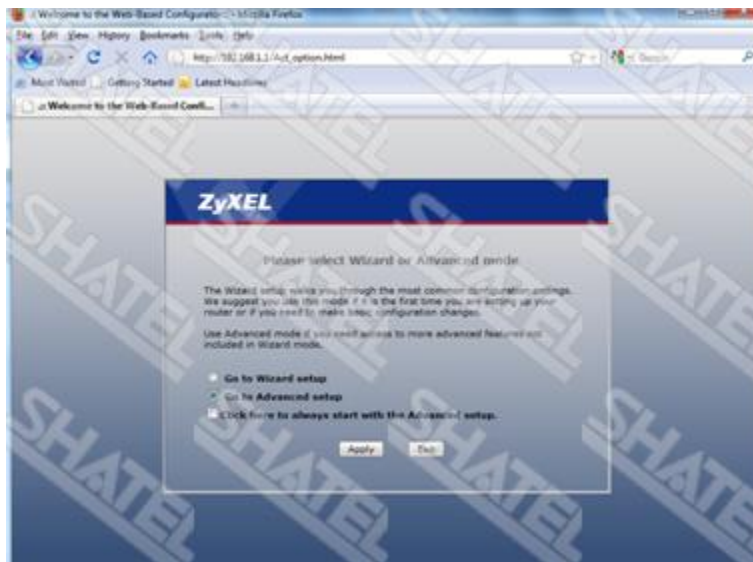
To enter the modem console, open a browser (Internet Explorer, Firefox, etc.) and type 192.168.1.1 in the Address Bar.

At this stage, type “admin” as password.



The following page appears.

At this stage and to access manual settings, select “Go to Advanced Settings” and then click “Apply”.

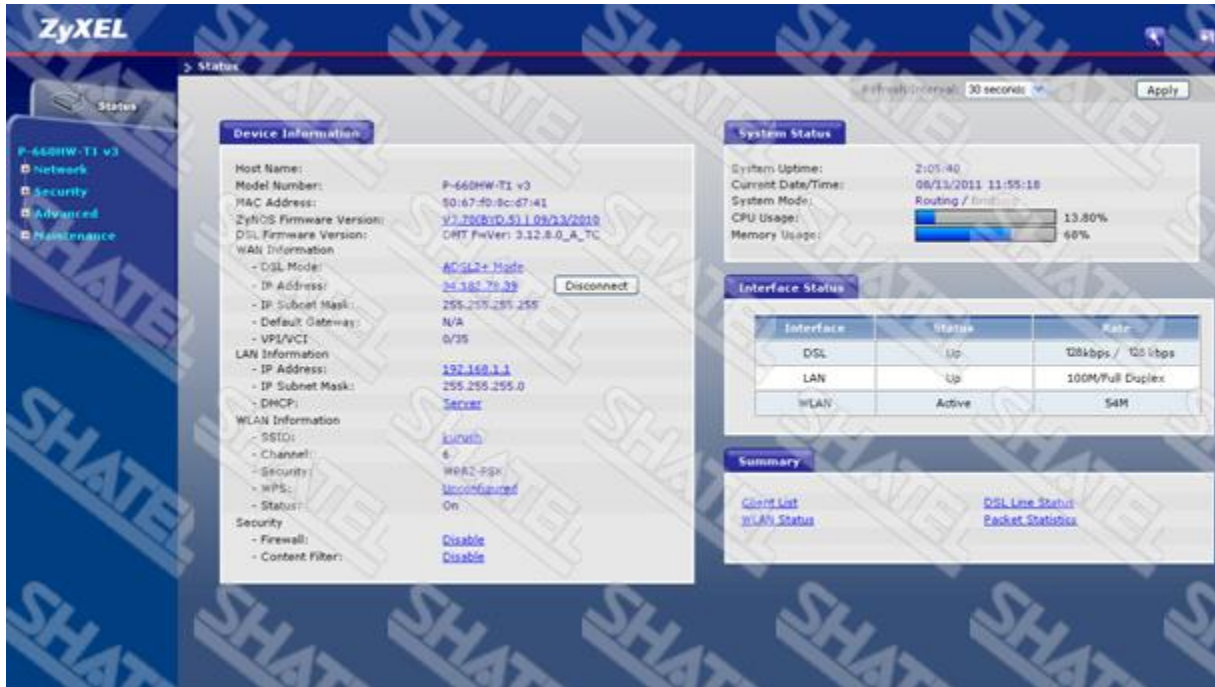


Modem’s initial page appears as it can be seen in the following image.

On this page and under “Interface Status”, you can view upstream/downstream speeds.



This speed should match the speed specified in your contract.



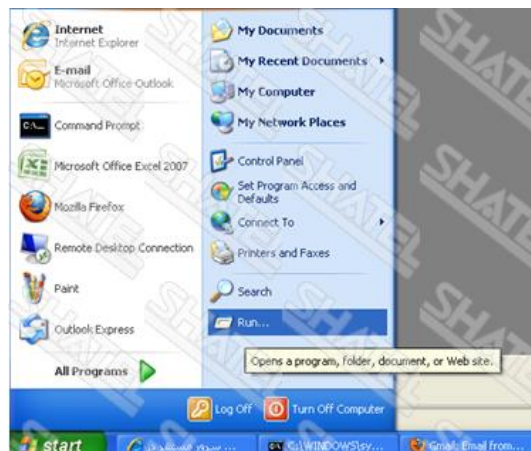
If the speed shown here doesn't match the speed specified in your contract, the problem might be due to the signal quality on your phone line or defective wiring network.

You can check the quality of the line by referring to "Line Signal and Noise Levels", and resolve any possible problems by following the stated procedure.

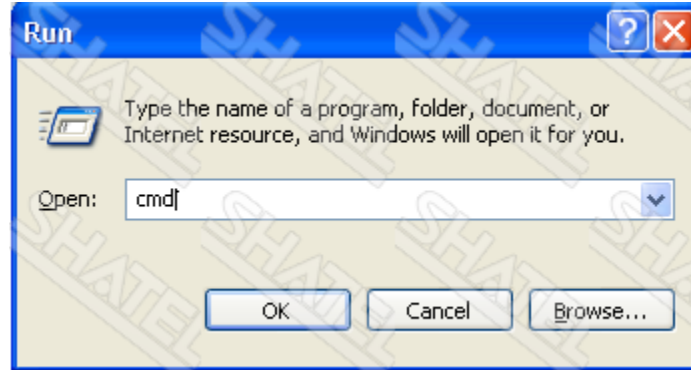
If the signal and noise level of your line are appropriate, but your Upload speed does not fit the service, contact Shatel technical support in your city.

### Check Ping Time

If you want to know the ping time of your internet service, you can trace a web address like [www.yahoo.com](http://www.yahoo.com). The Ping Time shown after modem's IP, should be below 100ms. To check the ping time first go to Start menu.

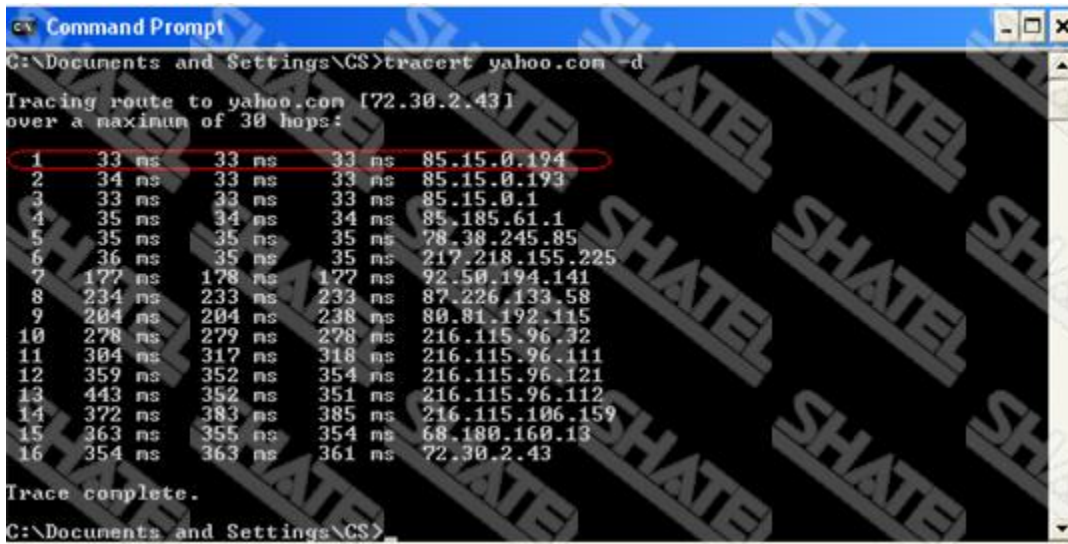


On the Start menu, select “Run” and type in “CMD”



A black window opens. Now in the new window type the following phrase and press Enter:

Tracert [www.yahoo.com](http://www.yahoo.com) -d



If you are connected through the modem, the first IP address belongs to the modem. We need the second IP address.

If the modem is connected, the first IP is Invalid IP of the modem and you need the second IP (Note that the case for the subscribers who use an IP Range on their service would be different to some extent).

In this example, the connection is made through the modem and the first IP that belongs to Shatel is 85.15.0.194.

The time that is displayed here should be below 100.

If this number is above 100ms, you can contact the support team in your city.



### **Check download speed**

Based on the specified speed in your contract, you may download at different speeds.

If you want to measure the download speed of your internet service, go to one of trusted websites which are known to be free of any interferences and download a link.

These sites include:

[www.microsoft.com](http://www.microsoft.com)

[www.mozilla.com](http://www.mozilla.com)

Notice that download speed you see is in Kilobyte per second (KBps), while the speed stated in your service contract is in Kilobit per second (Kbps).

The difference here is that in fact each Byte equals 8 bits. So, to convert the speed you need to divide the speed in kbps (Kilobit per second) by 8 to get the speed in KBps (KiloByte per second).

While running the speed test consider the following:

1. The speed specified in your contract is the maximum download speed that you can get considering that ADSL services are shared services.

Consider that according to the Resolution of Meeting No. 49 of Communications Regulatory Commission, the contention ratio for ADSL services is 10:1.

2. Sometimes you may experience a decline in the speed due to a problem on the website you are downloading from.

Furthermore, downloads through Peer-to-Peer programs such as Torrent aren't reliable because of the low quality of the destination and the possibility of simultaneous uploads.

3. If the download speed is lower than your service speed, and because of the effect the system has on download speed, you can check the speed of your service by means of Download Manager.

If the speed determined by Download Manager is appropriate, there exists no problem with your service.

### **Line Signal and Noise Levels**

Based on the line quality, you can experience different SNR and Attenuation rates on your line.

On ADSL services the quality of the line increases with a higher SNR and lower Attenuation.

Low line quality can result in lower speed or continuous disconnections.

You can check SNR and Attenuation on your line through the modem console.

Different SNR and Attenuation rates are as follows:

- SNR Margin Upstream: Signal to noise ratio from modem to DSLAM
- SNR Margin Downstream: Signal to noise ratio from DSLAM to modem
- Line Attenuation Upstream: Line noise level from modem to DSLAM
- Line Attenuation Downstream: Line noise level from DSLAM to modem

It is worth mentioning that if your port in telecommunication center is checked, the SNR Margin Upstream and SNR Margin Downstream should be 30 or above, and Line Attenuation Upstream and Line Attenuation



## Internet Tutorial Content

### Checking ADSL Service Quality Factors

Downstream should be 4 or below. And these are affected by the quality of the line. The appropriate measures on the modem will differ as 15 and above for SNR Margin and 30 or below for Line Attenuation.

You can check these on your modem console.

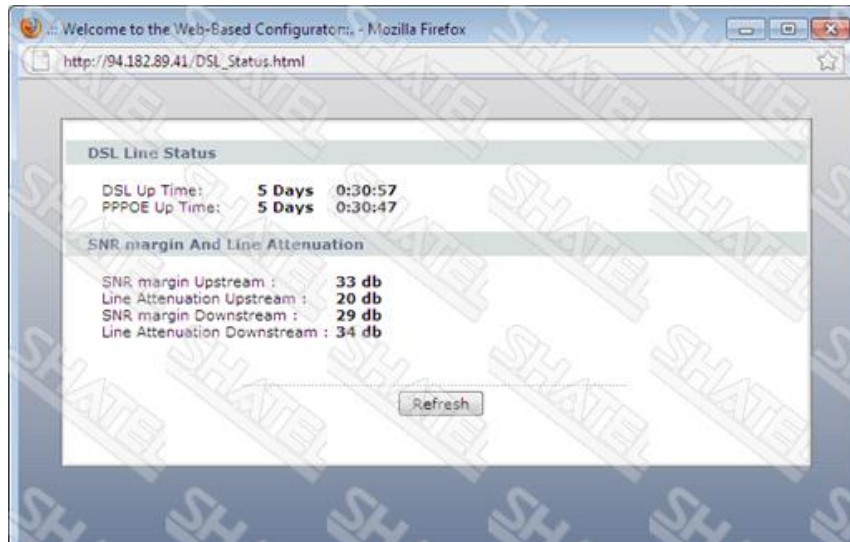
### Check Line Signal and Noise Level on Modem

If you want to view line signal and noise level, on modem Status page select DSL Line Status.



This will open a page for you.

On this page, you can see line signal and noise and the Up time of the modem.





## Internet Tutorial Content

### Checking ADSL Service Quality Factors

It should be noted that as bandwidth increases, SNR and Attenuation vary, since higher speed of the service requires a more suitable platform.

The factors that reduce SNR and increase Attenuation include:

1. There is another device being used on the line without a splitter such as a phone or a fax machine.
2. The telephone cord is close to an electricity cord.
3. There is a defective splitter on the line.
4. There is a mobile device, a wireless phone, a fluorescent lamp, a microwave oven beside the modem.
5. The wiring inside the building is old or rotten.
6. There is a problem with the phone cord from the wall outlet to the modem, or the telephone socket is faulty.
7. There is an anti-power plug used on the socket.

If the problem persists after checking these issues, you can contact Shatel Technical Support in your city.