

How to pay less fees on a Bitcoin transfer ?

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For people wishing to enter the world of so-called digital currencies and in particular Bitcoin, which is the market leader in the cryptocurrency or token market, they will undoubtedly initially encounter the payment of fees on the bitcoin network (Blockchain). These fees are the fee charged by the Bitcoin network to execute your transfer (cash spending transaction from one Bitcoin account to another).

The above commission or fee on the Bitcoin network is mainly calculated on the basis of three parameters:

Only one of the three parameters listed below we can not modify, as this is established by internal calculations within the Bitcoin network commonly known as Blockchain, as a breviary the blockchain is the software or program that controls all operations of the Bitcoin digital currency, it is the one that transfers payments and deposits stored in a database that has a very high level of security to not be modified by an external, everything is done through a consensus between computers distributed around the world.

Continuing with our goal of how to pay less commission on a transaction on the Bitcoin network, the only parameter we cannot change is:

1. How saturated is the Bitcoin network, i.e. what is the demand for transactions within the network at a given time that will determine the computational power expenditure to process the transaction sent. Depending on the load on the Bitcoin network, the next point (2) will go up or down.

The second parameter to consider is the "Fee" or "Average Fee" established by the systems that are in charge of executing the transactions worldwide, these distributed systems (computers) around the world are called "Miners" and these systems establish this fee after reaching a consensus between all the systems automatically and in times as short as seconds (currently there are around 9,700 computers distributed around the world, which contain the same information and are updated at any instant that a transaction is executed).

2. The "average rate" set by Bitcoin miners is dynamic and changes depending on whether the Bitcoin network is saturated or not. Miners are people with the help of computers who are in charge of executing transactions (payments and deposits) within the Bitcoin network.

This second parameter is normally not modified, as it is the average fee proposed so that the transaction to be sent is processed in a reasonable time (between 10 and 30 minutes), in case of lowering the fee this would imply that the transaction is executed in a longer time which can be days or weeks or simply not executed at all.

There is a third point where we can positively modify to reduce the commissions or fees to be paid when requesting a Bitcoin transfer.

3. The type of account or address we use to make the transfer as the sender.

This last point is where we will focus our attention. But first we will look at the types of accounts or addresses we can have on the Bitcoin network.

The address in Bitcoin is making a similarity with traditional banks the following comparative, understanding that it is only similar in its components to identify how it integrates or composes an account or address in Bitcoin and to be able to track from which account the transfer comes out and where it is deposited, understanding that in traditional banks internally work completely different to the Bitcoin network, this example is only to understand the components of a current account or commonly known as address in Bitcoin.

Similarity of a bank account with an account on the Bitcoin network.

What is a Bitcoin address (account) ?

Bank (Tradisional)

12345678910XXXXXXXXXXXXX

Bank account where the
Deposits are stored or withdrawals are reflected



Dynamic security token or password for
transfer funds to another account

Bitcoin Network (Blockchain)

18Zcyxqna6h7Z7bRjhKvGpr8HSfieQWXqj

Common Bitcoin account or address known as (address)
where deposits or withdrawals are stored is composed of
34 alphanumeric characters

5fa9c7c1756d250664fc5c0d2d65ef4fc07187d10546a0090078da196607a395

When an address is created in
Bitcoin is always associated with a password
64-character alphanumeric code called "Private Key", which serves as a
To authorize transfers to another Bitcoin account.

Another very important point is to know that a Bitcoin address is composed of a series of numbers and letters combined, this string of characters for us will not make much sense but for the Bitcoin network is an address that understands perfectly, it is good to know that every time an address is generated in Bitcoin a series of mathematical processes are applied where the Bitcoin network can identify uniquely, securely and accurately these addresses to make their operations.

Based on the above and knowing that we know what a Bitcoin address is, we will now look at the types of addresses that can be found on the Bitcoin network.

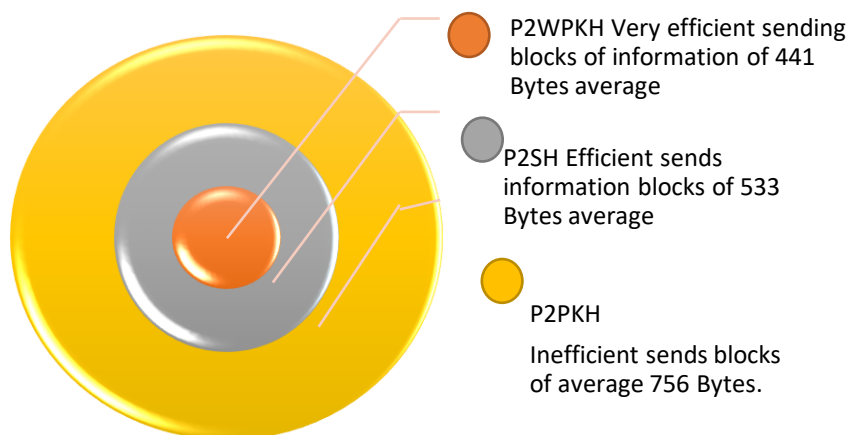
There are 3 types of addresses in the Bitcoin network:

- P2PKH or Legacy-address (common address format) is the first and most commonly used version of a Bitcoin address that starts with the number "1" and has 26 to 36 characters. The average rate when sending from a P2PKH address is usually higher than when sending from a Segwit address, because transactions with obsolete addresses are larger in size in bytes of information sent. Example: **1A1zP1eP5QGefi2DMPTfTL5SLmv7DivfNa**
- P2SH The second most used new address type is structured similarly to P2PKH, but starts with "3" instead of "1". P2SH provides more complex functionality than the previous address type. To spend bitcoins sent via P2SH, the recipient must provide a script corresponding to the hash and script data, which makes the script true. However, all a common user needs to know is that by using this type of address instead of P2PKH, the average transaction fee will be lower. Example: **3GRdnTq18LyNveWa1gQJcgp8qEnzjv5vR**
- P2WPKH or Bech32 is an advanced type of address used to reduce blockchain block sizes to speed up transaction response time. Addresses start with "bc1" and are longer than P2PKH and P2SH. Bech32 is the native Segwit addressing format (although P2SH can also be a Segwit address), so it is generally referred to using Segwit addresses. The advantage is the lower transaction sending fee and the high processing speed. The disadvantage of such addresses is that not all wallets and systems support it yet. Example: **bc1qncyhslv83yyp0q0suxw0uj3lg9drgqq9c0auzc**

The commission or fee charged is based on the three points above (fee charged by the miners, saturation of the Bitcoin Network and the type of address you have), in the case of addresses we will see why and how we can lower the fee or commission.

In the Bitcoin network each type of address can handle different types of digital information, each time a transaction is sent (Payment or Deposit) blocks or packets of information are sent in the Bitcoin network, these blocks are weighted or measured in the common unit of a computer (Bytes) the more information is sent by normal relationship the Bitcoin network will need more computing power to process it, if the blocks of information are small the computing power will be less, This is the key to the savings in the overall fee charged by the Bitcoin network and this is because the address that sends larger blocks is the P2PKH address, addresses that begin with "1" are the most inefficient, however it is the most common because with these addresses Bitcoin technology began, Later, with time, the processes for sending information and optimising this information to reduce the amount of information sent were improved, and so the other two different addresses were born, which, unlike the first (P2PKH), have or provide other security features.

To give us a visual idea of the number of blocks (Bytes) when using each type of address we have the following example:



Simply put, each type of address handles different amounts of information (bytes), more or less information sent to the Bitcoin network, this is because every time there are technological advances, ways are found to reduce or optimise the data sent.

Therefore, we have the following performance comparison of each type of Bitcoin address used.

Table: Bitcoin address performance comparison

For simplicity we will use the following abbreviations

- I - P2PKH, the address begins with "1"
- II - P2SH, the address begins with "3"
- III - Bech32, the address begins with "bc1"

Sender address	Recipient address	Average transaction weight Bytes	
I	I	764	The most inefficient transaction, the type of sender's address plays a key role, the recipient's address affects the efficiency is not significant in all examples.
I	II	756	
I	III	752	
II	I	541	Transactions with a P2SH sender address are more than 29% cheaper than with an outdated P2PKH address.
II	II	533	
II	III	529	
III	I	449	Transactions with a Bech32 sender address are more than 40% cheaper than with an outdated P2PKH address; and more than 15% cheaper than with a P2SH address.
III	II	441	
III	III	437	

In short, if you want to pay less commissions or fees on the Bitcoin network, you should use P2WPKH addresses starting with "bc1".