

Forum:[Hack Forums](#)

Thread: [Bitcoins | How To Mine Bitcoins | Tutorial | Everything About Bitcoins |](#)

Canonsx130 - May 27, 2013, 1:41 am

[img]<http://bitcoinme.com/files/5513/0526/2891/bitcoin-225.png>[/img]

This thread is targetted on users who are completely new to the world of CryptoCurrency and BitCoin itself. Bitcoin has become incredibly popular and the value has increased so high compared to earlier years probably due to the excitement about this crypto currency. I will explain all the basic terms and more about bitcoin too. This is meant to be an education thread and I will not be responsible for your actions using information found in this thread. This is my humble attempt to educate the beginners and introduce them to this new and brilliant field. Though the future of these currencies cannot be predicted, it sure is not going down in a fortnight.

[img]<http://s15.postimg.org/ergu3sssb/image.png>[/img]

Bitcoin (BTC) is a cryptocurrency first introduced in 2008 which was known to be an electronic cash system. It is entirely based on a cryptography protocol and does not have a central authority. Each bitcoin has eight decimal places, forming 100 million smaller units called satoshis. Bitcoins are usually transferred or transmitted through a computer device or through a smartphone and there is never an intermediate financial institution. There are servers called bitcoin miners that processes the trasactions done using Bitcoins. There is a ledger located in these servers and every transactions are archived and confirmed by adding them to the ledger. And through every ledger update, some bitcoins are created. The number of bitcoins created is halved every 4 years such that there would be no new bitcoins by 2140. So the maximum amount of bitcoins at that moment would be around 21 million which is quite alot. Ofcourse there is no guarantee that BitCoin will stay that long unfortunately. Bitcoins are now accepted in trade by merchants, online users and other individuals these days. Unfortunately, lots of illicit drug transactions are done using BitCoins too due their high security and easiness of transaction.

Bitcoins can be sent and received through various ways. There are lots of websites and applications allowing you to do safe transactions on BitCoins. Any user can have any number of Bitcoin addresses which you can use to send and receive bitcoins. They are like email addresses, but just that they look a bit weird. The bitcoin address is a logn string of characters which looks similar to 1dm20918md0129d029mdd21. There are many vendors out there offering you banknotes and coins which have bitcoin denominations on them. You'll get a bitcoin private key along with it while purchasing and you can verify your balanceby breaking a seal to get access to the key.

[img]<http://s20.postimg.org/4oej445ct/as2.png>[/img]

How do you get Bitcoins? The easiest way is to go to a market, and buy it outright but the market is really unpredictable and it is not quite the best idea. At around \$135 USD per bitcoin, the direction of the bitcoin is not easy to guess. In short, you should probably mine some bitcoins. But what is bitcoin mining? To make it easy for you, think of mining as a work done by a very large group of people in solving a problem. For example finding the nth term of a huge series of numbers or maybe trying to find a key that can be used to decrypt the password for a file. And these are called blocks. But whenever you find one, it gets harder to find as time progresses. So nowadays you need high-performance computers to find them. But when it comes to Bitcoins, it is not about solving

these problems; it is about finding a sequence of data which is usually called a block that produces a particular pattern when the Bitcoin 'hash' algorithm is applied to the data. So whenever a match occurs, the miner obtains Bitcoin. The size of the bitcoins you receive reduces as more bitcoins are mined.

The difficulty of searching and finding these blocks are increased to that it becomes more difficult to find one. So combining both these factors, it reduces the time rate at which Bitcoins are produced. Bitcoins are often rated in hashes per second. With the difficulty and the bounty settings at a particular time, it is possible to calculate the expected rate of a Bitcoin production. This requires heavy PC specs and nowadays, people use their Graphics Processing Unit (GPU) to do this work. They are massive and they are strong. With a good PC along a great graphics card, you could earn upto 0.04 BTC per day. But this can vary hugely depending on your specs. The process of finding blocks is so popular these days that the difficulty of finding a block is so high and it could take upto 3 whole years for you to find a block and generate any coin. While you could get a machine aside to do the job, by time you've mined some coins, the energy cost will cost more than what the actual bitcoins are worth. There is an ingenious solution to overcome this problem. And it is called Pooled Mining which we will see in the next section.

[img]http://s20.postimg.org/9upof5k4d/pools.png[/img]

As I've said already, mining solo is very deprecated these days. It is almost impossible to mine any coins and it is often never profitable to the miner. Pooled mining is far more lucrative however. There are services like Slush's Pool which lets you split the work of finding data among lots of people. This is the equation of how it works: $(25 \text{ BTC} + \text{Block fees} - 2\% \text{ fee}) \times (\text{shares found by workers}) / \text{total shares in current round}$

When this equation is simplified, you can easily identify how the entire system works. You work for shares in a block and when you complete fixed percentage of the block, less fees. So this is basically the whole concept. Pooled mining effectively reduces the granularity of the block generation reward, spreading it out more smoothly over time. There are lots of approaches that are created to mine coins. Most of them have basically the same idea so we won't be covering them in this guide. Below I will share how you can get started using bitcoins and how you can successfully mine Bitcoins.

[img]http://s20.postimg.org/m33t9i8t9/handson.png[/img]

Get A Wallet - A wallet is basically what the name is. A Wallet in the Bitcoin world is a place where you can store your Bitcoins. It allows you to do transactions and gives you the ownership of an address which you'll use for the transactions. You can either store your wallet on your PC or store it online. [Coinbase](#) is an online wallet which is fairly easy to set up and use. Click [here](#) to go and choose your own wallet. There are no preferred wallets but basically all of them does the same thing. It's always wise to choose an offline wallet for obvious reasons. And once you've created your wallet, you should get an address like stated above.

Join A Pool - So now that you've got a Bitcoin address, you need to join a mining pool. So you have to work with a group of miners on blocks. One of the most popular pool is [Slush's pool](#). So go ahead and check it out. There are lots more pools you can find easily but most of them differ by the fees they charge per block. So the basic idea is, if there are less members in a pool, it will take longer to discover while pools with many members result in very small payments. What you need to do now is go to Slush's pool and quickly create an account. You now need to login to your account and create two-three workers. The workers are sub-accounts you have with their own individual usernames and passwords. Make sure you enter your wallet address into the respective field.

Spoiler ([Click to View](#)) [img]http://s20.postimg.org/lmn70tafx/Ashampoo_Snap_2013_05.png[/img]

Get A Miner - There are so many options for multiple platforms. Miners use spare GPU cycles to power the mining operation. You can use a simple tool like [GUIMiner](#) which is a very simple solution for windows users since it allowed you to create miners using almost any graphics card. 50Miner is another cool alternative miner you can check out. But keep in mind that you need to enter your worker info and pool in them before they start mining coins for you. Linux Users can use [CGMiner](#) which is a great miner. And for OS X users, we have the [DiabloMiner](#), which is quite old and works in command-line. Though it is quite slow, it works quite well. So this is the end of the guide. I've explained most of the things you need to know about Bitcoins and I can guarantee you that if you've read this guide properly, all your common Bitcoin doubts have been cleared. If you still have any more doubts, drop a comment below. But to end this guide all I have to say is, if it costs you more to run your hardware than you gain in bitcoins, you're probably doing something wrong.

[img]http://s20.postimg.org/88a44s3rx/use.png[/img][Bitcoins Wiki Article](#)

[Bitcoin official website](#)

[Bitcoin Charts](#)

[Bitcoin Exchange](#)

[Bitcoin Exchange Site](#)

[Coinbase](#)

[Slush's Pool](#)

Swirl - May 27, 2013, 7:58 am

What pools would you recommend to be in? Also what is a good amount to be in a pool with?

redi - May 27, 2013, 8:03 am

Nice Thread bro! good luck getting a award :)

Canonsx130 - May 27, 2013, 8:40 am

Slush pool is great for you to get started. Here is the link: <https://mining.bitcoin.cz/> . You can also check BTCGuild which does not charge any fees while Slush charges 2%. And it does not matter what amount you have atm.

Trixter95 - June 19, 2013, 8:34 am

Nice thread mate very helpful and information packed. Just ordered my 5 GH/S miner can't wait for it to get here ! Hopefully I can start earning some \$\$\$.

Canonsx130 - June 20, 2013, 1:18 am

That's amazing. The miner should do good for you. Glad you liked my thread.

Adorable - June 30, 2013, 5:22 am

Thanks for the awesome guide Canon.Take care!

grumci - June 30, 2013, 1:13 pm

Thank you for the idea ! Good luck :)

Canonsx130 - *July 2, 2013, 1:12 am*

Thank you both for the comments. Glad you liked it.

SH?Đ? - *September 8, 2013, 12:55 am*

can u make this into a video it would be cool

Canonsx130 - *September 8, 2013, 5:53 am*

That's a good idea Berries. I have never really thought of it but if I get some time, I'll try to give it a go :)

NiklasDeWitt - *October 9, 2013, 3:24 am*

Thank you for the nice tutorial.

I will give it a try :)

Canonsx130 - *October 10, 2013, 10:38 am*

Thanks Niklas for dropping by a comment. Glad you liked it.