

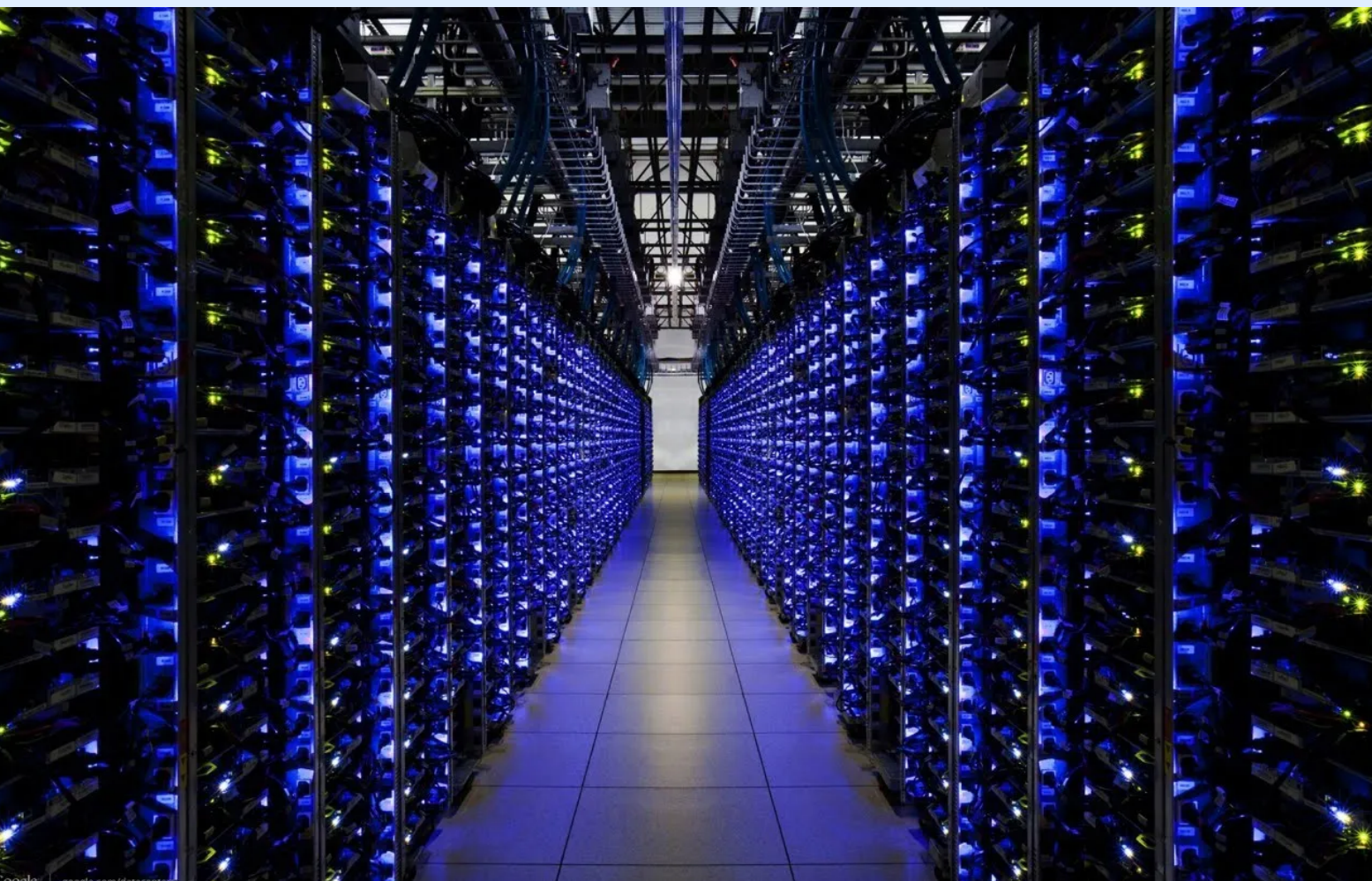
CRYPTOCURRENCY MINING:

HOW TO FIND YOUR GOLD MINE



Mining cryptocurrency is just like a race, in which those who start early will be rewarded. There is still time to get in on the rush, if you take the time to learn the basics properly.

History of Cryptocurrency Mining



In simple words, mining is the process of solving complex mathematical tasks, the result of which new blocks of information are released. This brings a certain amount of digital money, which is entered into the common bank and registered in the public blockchain. The participant who first solves this task receives a reward. This approach was specially conceived as an incentive for those who sacrificed the computing power of their hardware to maintain the network and extract new coins.

For the first time such method was applied for Bitcoin, and at the moment most of other virtual currencies act according to similar principles. Everything is arranged in such a way that the complexity of the calculations steadily grows, which requires a constant increase in the computing power of the network.

In the first months after Bitcoin appearance, it was possible to effectively mine it on almost any computer, using only the CPU. But very soon the network became so complicated that it was even unprofitable on the most powerful PC processors.

Then, advanced video cards began to be used for this purpose, and the hardware manufacturers began actively producing motherboards with 3, 4 and even 5 PCI-Express slots for installing top-end graphics

adapters in SLI or Crossfire mode. On the basis of powerful video cards, amateur miners began to build so-called "farms" - special computers intended for the commercial development of cryptocurrencies.

However, as the Bitcoin network grew more complex, even farms became less profitable, and this is due to several reasons:

- Bitcoin's emission protocols are structured so that the reward for mining is not distributed evenly, and preference is given to the most powerful machines ;
- After calculating every 260 thousand blocks, which occurs approximately every 4 years, the size of the reward for calculating one block has decreased in half.
- Based on the increasing demand the cost of hardware, especially for the video-cards and motherboards increases on a regular basis.

A new term in the field of mining in 2013 was the appearance of ASIC-modules. Based on them were special industrial computers, which were designed to calculate hashes.

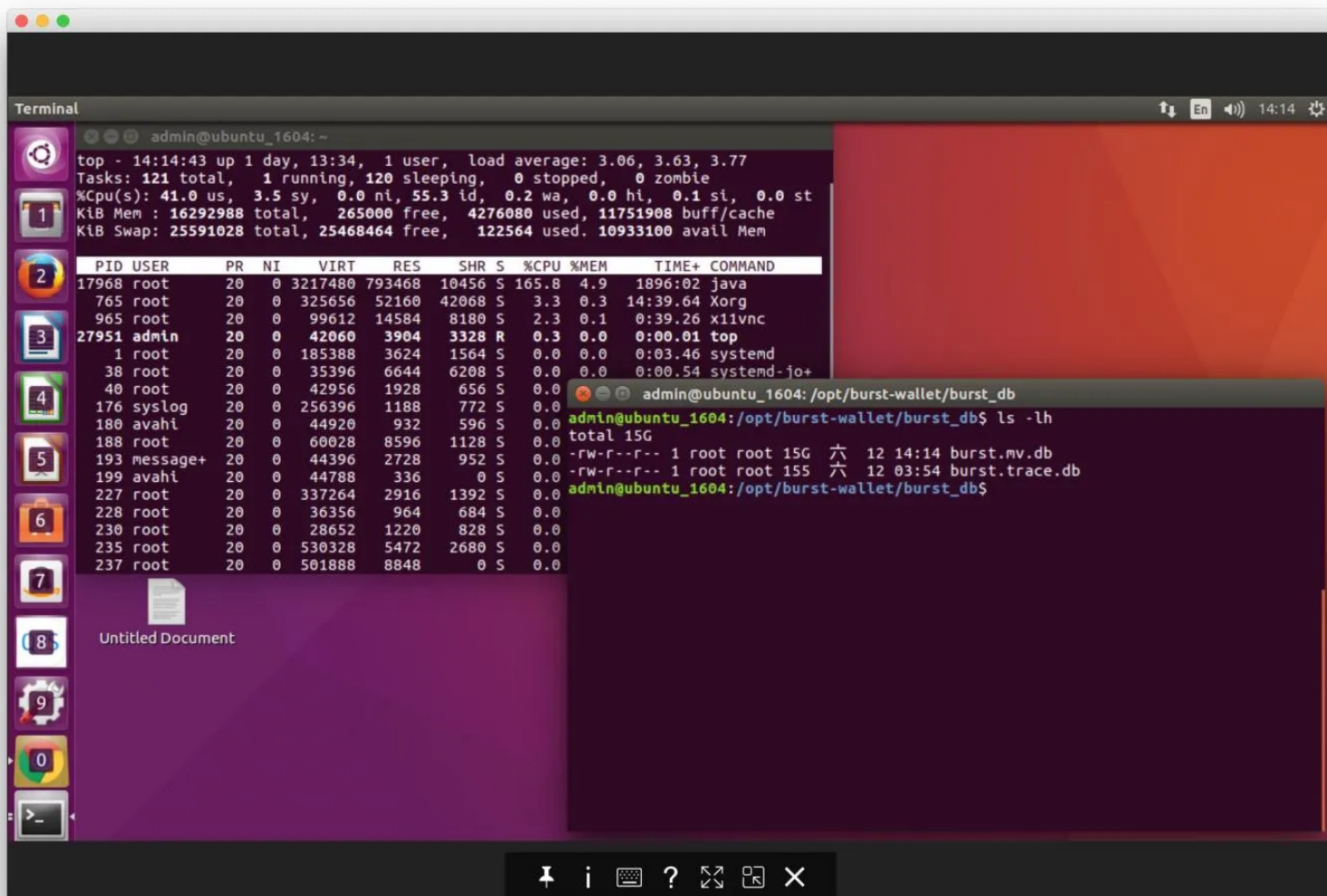
What you Need for Mining



In general, if you are going to generate coins, you will need:

- **Online wallet.** It can be downloaded, with a specific digital currency, to the developer's official resource. It is a password-protected container, where the received income will be stored.
- **Software package.** At the moment there are different programs for mining, available on all popular OS.
- **Registration in the online pool of miners.** Members of these communities unite their computing devices to increase the effectiveness of their work. The coins are divided among all the participants.
- **Register in the online exchanger.** It will be necessary for those who want to immediately convert virtual coins into ordinary money.
- **Secure Internet connection.** Ideally, the speed should be at least 2 megabits per second. The higher, the better.
- **Space for equipment.** Any cool or air-conditioned room.
- **The mining equipment.** It can be a desktop computer, but it's better to use special computers designed for this purpose. Conventional PCs, laptops, game consoles or mobile gadgets not only lack performance, but they can't be used for their intended purpose during the mining process - the process takes up all the resources of the device.
- **High-quality cooling.** It will also require good ventilation to remove hot air from the room. Mining makes "machines" work at 100% load, which causes increased heat emission. Therefore it is important to keep the room cool.

Programs for Cryptocurrency Mining



The ASIC-modules mentioned above often come with a ready-made software set and require only settings for a specific type of cryptocurrency. As for mining on conventional PCs, there is a fairly wide range of specialized software.

Software for Windows

[Bitcoin Miner](#) has an easy-to-use interface, power-saving mode, pool support and fast material transfer. Another useful option is the function of profit reports.

It has the following features:

- dynamic frequency scaling;
- free license;

- FPGA support.

[CGMiner](#) is the most famous and popular program among miners. It is based on the source code of CPU Miner and has many useful functions such as:

- direct cooling system control from the program;
- remote access;
- self-detection of new blocks;
- support for multiple GPUs;
- availability of tools for processor debugging.

OS X Software

[RPC Miner](#) is the universal and most beloved by all Mac users program for mining. It is fully integrated into the OS and has a built-in developer API.

[MultiMiner](#) is a popular desktop application for OS X, which can also be used on Windows and Linux.

It has the following capabilities:

- intuitive intelligent interface;
- automatic updates;
- notification of profitable coins;
- customizable strategies for automatically launching currencies;
- built-in proxy;
- direct access to the engine and API settings.

These are the main mining programs, but there is still a lot of opportunities for creativity.

And coming to the next stage of development, as any money, cryptocurrency efficiently buys and sells. To implement the exchange operations with the best possible rate, some ready-to-use tools can be facilitated. [Coinbase](#), [Gemini](#), [Kraken](#), and some others provides the standard set of features. You can create your own bot to save time and be a successful trader.

As the normal banking system and cryptocurrencies has no direct connections, to begin the trade you need to create your own account on the crypto exchange stock. (You can add money there utilising visa+stripe).

As the next step you need to initiate the exchange. With the help of simple code, like this you can automate the procedure of real-money and cryptocurrency exchange:

```
const stripe = require("stripe")(  
  "stipre_key"  
);  
stripe.charges.create({  
  amount: 10000,  
  currency: "usd",
```

```
source: "tok_visa" // obtained with Stripe.js  
}, function(err, charge) {  
  ...  
});
```

If you are working on the stock, your freshly created purchase request will be set in the pool. Just as another user, who sells the 'ETH' at the requested price is appeared there, the exchange operation will be implemented in the automatic mode. Later on you can automate the procedure of transferring your 'ETHs' to the personal pocket.

You may need special features or, maybe, you know how to make life of miners easier with the right software. You may even [build your own cryptocurrency](#).

Magora developers can build the architecture for your stock exchange system, as well as to assist your company in supporting your cryptas. Our expertise does not end there; our team can also help you with any software development project, so if you have any questions - do not hesitate to ask.