

**BITMAIN ANTMINER U3**  
**CY-645**  
**BLOCKCHAIN TECHNOLOGY**  
*NIKHIL PATEL*  
*SPRING TRIMESTER 2022*

## Overview :

In this lab we will learn how to mine a bitcoin using antminer u3 on window 10. Bitcoin antminer u3 is a mining tool for SHA-256 algorithm. The hashrate for mining bitcoin goes from 60 GH/s to 63 GH/s for a power consumption of 60W.

Below image shows how the connection is done on antminer u3



**(Note : This picture was taken on 6/28/20)**

## **SETTING UP THE DEVICE :**

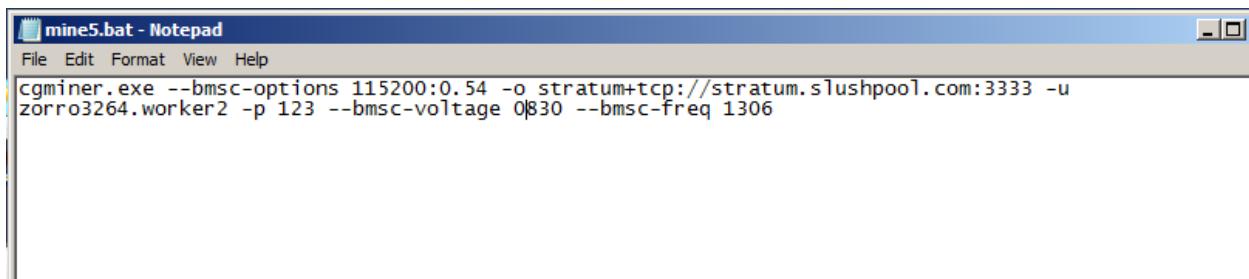
Now, we will setup the Antminer u3:

**Step 1**: Plug in the USB device to a windows 10, then notification will pop up on the right hand side of the screen( because we didn't install the driver) install zadig on your pc for the installation of driver for the device.

**Step 2** : Create an account of slushpool and make one worker.

**Step 3** : Open terminal, go to cgminer and run below command

**Syntax :-** cgminer.exe --bmsc-options 115200 -o [URL-Of-Slushpool-Server] -u [USERNAME] -p [PASSWD] --bmsc-freq1306



- As we can see cgminer is running in the background and in the beginning it takes some time to connect. If the connection is 100% complete with the slushpool, then it will start generating a block.

```

cgminer version 4.6.1 - Started: [2020-06-25 19:27:07]
<5s>:49.10G <1m>:28.34G <5m>:27.54G <15m>:23.62G <avg>:30.14Gh/s
A:12288 R:0 HW:0 WU:421.5/m
Connected to stratum.slushpool.com diff 512 with stratum as user zorro3264.work
Block: 11c3be2b... Diff:15.8T Started: [19:50:13] Best share: 24.5K
[U]SB management [P]ool management [S]ettings [D]isplay options [Q]uit
0: AMU 0 : : 48.11G / 30.17Gh/s WU:421.5/m
[2020-06-25 19:44:31] Stratum from pool 0 detected new block
[2020-06-25 19:46:21] Accepted 528ee37c Diff 794/512 AMU 0
[2020-06-25 19:47:27] Accepted 08499bb7 Diff 7.91K/512 AMU 0
[2020-06-25 19:47:39] Accepted 1f84828f Diff 2.08K/512 AMU 0
[2020-06-25 19:49:14] Stratum from pool 0 detected new block
[2020-06-25 19:50:13] Stratum from pool 0 detected new block
[2020-06-25 19:50:16] Accepted 28263992 Diff 1.63K/512 AMU 0

```

- As we can see here it is connected to stratum.slushpool.com . Those accepted address Diff 794/512 AMU 0 which checks the transition block, if it's verified then accept or else reject. If they find a new block then it shows a new block found on slushpool.

#### Step 4 : Slushpool dashboard

**DASHBOARD**

**MONITORING**

**WORKERS**

**ACTIVITY**

**FINANCE**

**Rewards**

**PAYOUTS**

**POOL STATISTICS**

**SYSTEM STATS**

**Scoring Hash Rate**

**Workers States**

**Your Contribution to the Pool**

Last Share: 5 minutes, Hour, Day

**0.00000958 BTC** **0.00000000 BTC**

**Confirmed Reward** **Unconfirmed Reward**

**0.00418033 BTC** **2 Years**

**All Time Reward** **Last Payout**

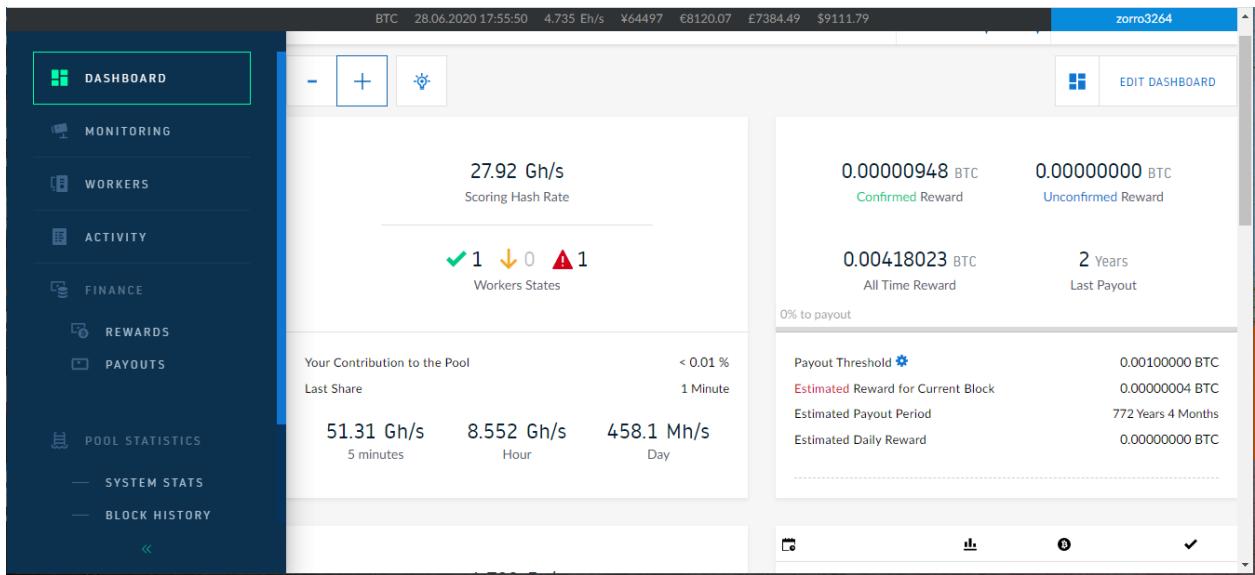
**0% to payout**

**Payout Threshold**: 0.00100000 BTC

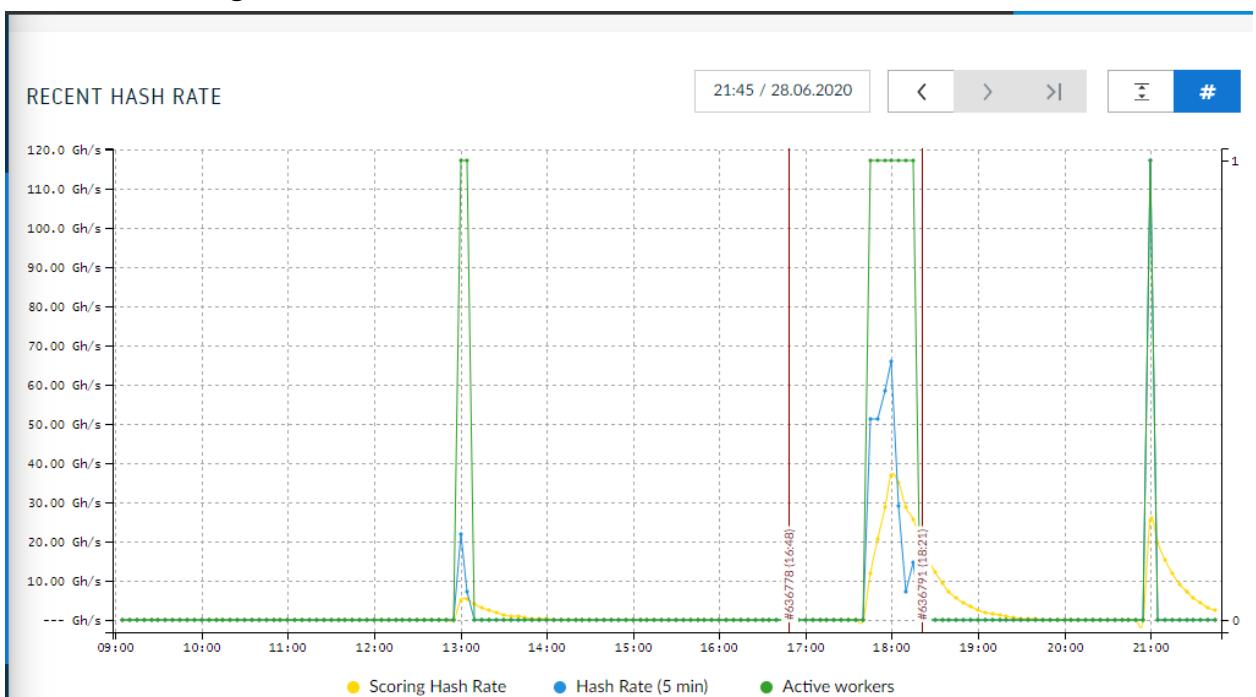
**Estimated Reward for Current Block**: 0.00000000 BTC

**Estimated Payout Period**: ...

**Estimated Daily Reward**: 0.00000000 BTC



- 0.00000000 BTC (unconfirmed) that we got since it start running ( we started running).
- 27.92gh/s (currently running on)
- Here 1 in green color indicates that the worker is online which means its mining.



- Let's calculate since it's running till the current time when we observed output.
- In Jersey city the power rate is 13.42 c/kWh (cent/kilowattHour).
- Mining start from 2020-06-25 19.27 till 2020-06-29 at 23:30(approx. 3 days)
- Antminer working with 60W power so  $60w \times 72hr = 4320$  watts-hours for the entire session.
- Till 2020-06-29 at 23:30 time I rewarded 0.00000958 BTC during 72 hours so let's calculate  $0.00000958 \text{ BTC} \times 19227.90 \text{ (current bitcoin price)} = 0.18420328$  cents not even a penny.

**CONCLUSION :** After calculating the amount we earn by doing this lab we came to the conclusion that we have not got much btc as we would have to pay for power consumption also the cost of other power consumption, processor like antminer u3, GPU, cooling fan and other components. We got a loss of factors with the pool server so we should try to run more than one worker so that it generates more BTC in less time but the power consumption will be the same in fact per year the power investment will be double but not the cost.

To conclude with my final statement, mining a bitcoin in a personal lab is not a good idea because you need to have a good backup of the power supply and the system on which you want to generate a bitcoin should be awake until it's done.

## **REFERENCES**

All Thanks to PROF. ALBERT REALUYO & GHENAJ SANIH shared document which helped me to complete my LAB documentation .