

# 挖礦資訊及收益資料庫

*With Vue, Node.js Express, MAMP (MacOS, Apache, MySQL, PHP)*

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# 題目說明



- 1、在多人集資（顯示卡）挖礦的情境，挖礦的狀況（即時算力）及收益（以太幣）很難即時、公開和透明的被其他合夥人知道，通常只有擁有礦機權限的那個人能夠及時取得資訊。
- 2、挖礦所取得的以太幣收益分配在分潤計算上需人工分配利潤，也很難精確地去分配每個人的挖礦收益。
- 3、挖礦平台**HIVE OS**有**API**供開發者呼叫，可以即時地取得當前的算力及收益，但是此**API**只能提供固定區間的資料，太久以前（一天以前）的資料則撈不到。



# 解決辦法



- 1、透過呼叫**HIVE OS**提供的**API**將即時的資訊透過後端程式抓取，並視覺化地呈現在前端網站上供合夥人隨時查詢。
- 2、透過建置一資料庫系統，搭配後端程式定時擷**API**儲存相關資訊，自動化地分配收益，以及記錄相關資訊（即時算力、收益分配等等）。
- 3、定時呼叫**API**，將資訊保存下來，避免太久以前的資料**API**查詢不到。



# 資料需求分析



# 礦機的即時算力資訊

DBMS2021 | 各位同學 | Facebook | Project.ppt | clinal | Reddy ethash 280.2MH/s - NC | https://api.hiveon.net/api/v1/stats/ | 更新

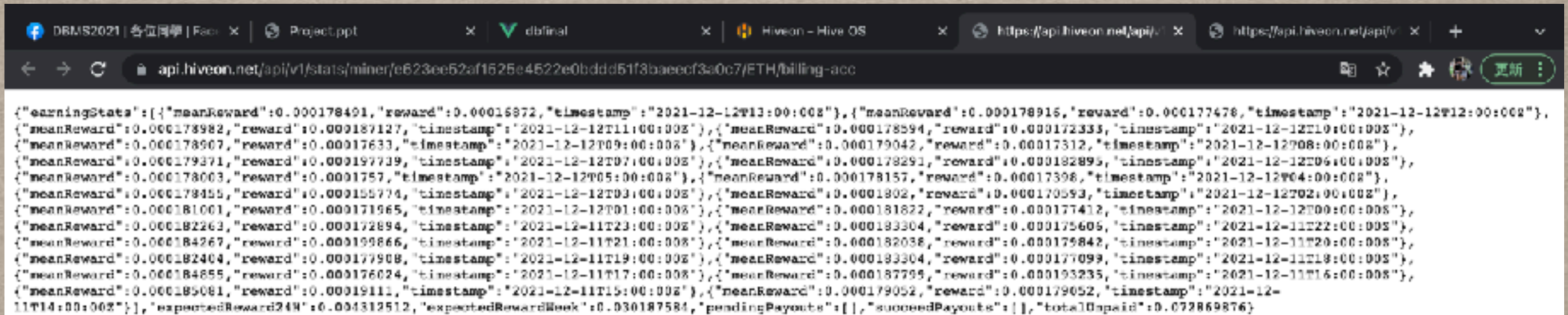
api.hiveon.net/api/v1/stats/hashrates?minerAddress=c623ee52af1625e4522e0bddd51f3baeef3a0c7&coin=ETH&window=10m&limit=144&offset=0&worker=Red...

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      "timestamp": "2021-12-12T13:50:00Z"
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      "reportedHashrate": "280326097",
      "timestamp": "2021-12-12T10:50:00Z"
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      "reportedHashrate": "280169144",
      "timestamp": "2021-12-12T09:00:00Z"
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      "reportedHashrate": "280163558",
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      "meanHashrate": "271669849",
      "reportedHashrate": "280097667",
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    },
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      "timestamp": "2021-12-12T06:40:00Z"
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      "meanHashrate": "269829397",
      "reportedHashrate": "280136810",
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      "timestamp": "2021-12-12T06:20:00Z"
    },
    {
      "hashrate": "307808333",
      "meanHashrate": "268934606",
      "reportedHashrate": "280089267",
      "timestamp": "2021-12-12T06:10:00Z"
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      "reportedHashrate": "280151406",
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      "meanHashrate": "269795474",
      "reportedHashrate": "280193215",
      "timestamp": "2021-12-12T05:30:00Z"
    },
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      "meanHashrate": "269332291",
      "reportedHashrate": "280157584",
      "timestamp": "2021-12-12T05:20:00Z"
    },
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      "meanHashrate": "269531133",
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      "timestamp": "2021-12-12T05:10:00Z"
    },
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      "meanHashrate": "269481423",
      "reportedHashrate": "280135149",
      "timestamp": "2021-12-12T05:00:00Z"
    }
  ]
}
```

可透過後端定時呼叫API寫入資料庫



# 即時收益資訊



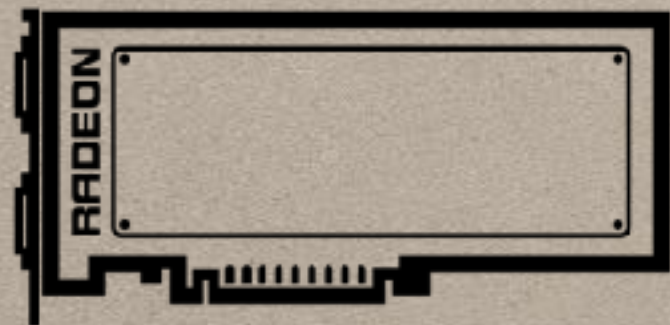
The screenshot shows a web browser with multiple tabs. The active tab is displaying a JSON response from the API `api.hiveon.net/api/v1/stats/miner/e623ee52af1525e4522e0bddd51f3baeef3a0c7/ETH/billing-acc`. The JSON data contains an array of `earningStats` objects, each with `meanReward`, `reward`, and `timestamp` fields. At the bottom of the JSON, there are summary fields: `expectedReward24h`, `expectedRewardWeek`, `pendingPayouts`, `successPayouts`, and `totalOupaid`.

```
{
  "earningStats": [
    {
      "meanReward": 0.000178491,
      "reward": 0.00016872,
      "timestamp": "2021-12-12T13:00:00Z"
    },
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      "meanReward": 0.000178915,
      "reward": 0.000177476,
      "timestamp": "2021-12-12T12:00:00Z"
    },
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      "meanReward": 0.000178982,
      "reward": 0.000187127,
      "timestamp": "2021-12-12T11:00:00Z"
    },
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      "reward": 0.000172333,
      "timestamp": "2021-12-12T10:00:00Z"
    },
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      "reward": 0.00017633,
      "timestamp": "2021-12-12T09:00:00Z"
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      "timestamp": "2021-12-12T08:00:00Z"
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      "meanReward": 0.000179371,
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    {
      "meanReward": 0.000178291,
      "reward": 0.000182895,
      "timestamp": "2021-12-12T06:00:00Z"
    },
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      "meanReward": 0.000178455,
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    },
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      "meanReward": 0.0001802,
      "reward": 0.000170593,
      "timestamp": "2021-12-12T02:00:00Z"
    },
    {
      "meanReward": 0.000181001,
      "reward": 0.000171965,
      "timestamp": "2021-12-12T01:00:00Z"
    },
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      "reward": 0.000177412,
      "timestamp": "2021-12-12T00:00:00Z"
    },
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      "meanReward": 0.000182263,
      "reward": 0.000172894,
      "timestamp": "2021-12-11T23:00:00Z"
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      "reward": 0.000175605,
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      "meanReward": 0.000184267,
      "reward": 0.000199866,
      "timestamp": "2021-12-11T21:00:00Z"
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      "meanReward": 0.000182038,
      "reward": 0.000179842,
      "timestamp": "2021-12-11T20:00:00Z"
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      "reward": 0.000177908,
      "timestamp": "2021-12-11T19:00:00Z"
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      "reward": 0.000193235,
      "timestamp": "2021-12-11T16:00:00Z"
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      "timestamp": "2021-12-11T15:00:00Z"
    },
    {
      "meanReward": 0.000179052,
      "reward": 0.000179052,
      "timestamp": "2021-12-11T14:00:00Z"
    }
  ],
  "expectedReward24h": 0.004312512,
  "expectedRewardWeek": 0.030187584,
  "pendingPayouts": [],
  "successPayouts": [],
  "totalOupaid": 0.072869876
}
```

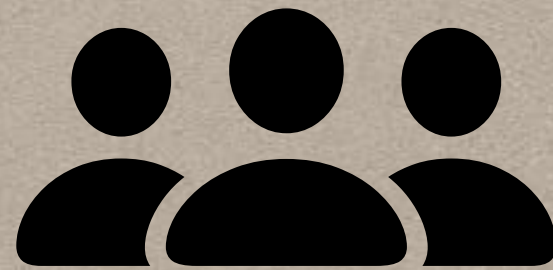
可透過後端定時呼叫API寫入資料庫



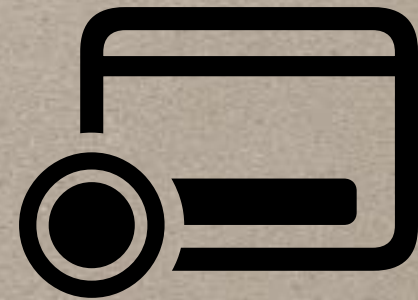
# 需手動建置的TABLE



顯示卡



合夥人



收益



# 系統功能分析



- 1、後端定時呼叫API，算力及收益資料自動化到資料庫 (**INSERT**)
- 2、前端能夠產生視覺化資料，即時反應算力及收益資訊 (**SELECT**)
- 3、登入功能 (**SELECT**)
- 4、輸入要提取的ETH數量，將其成為一筆記錄存在資料庫，且隨時可以修改及刪除 (**UPDATE, DELETE**)