



## PoSt-Satoshi era POS/DPOS

PS: 4  
Created: 2019

```
static bool init(CURL *&conn, char *url)
{
    CURLcode code;

    conn = curl_easy_init();
    if (conn == NULL)
        fprintf(stderr, "Failed to create CURL connection\n");
    exit(EXIT_FAILURE);

    code = curl_easy_setopt(conn, CURLOPT_ERRORBUFFER,
                           errorBuffer);
    if (code != CURLE_OK)
        fprintf(stderr, "Failed to set error buffer [%d]\n",
                code);

    return false;

    code = curl_easy_setopt(conn, CURLOPT_URL, url);
    if (code != CURLE_OK)
        fprintf(stderr, "Failed to set URL [%s]\n", errorBuffer);

    return false;

    code = curl_easy_setopt(conn, CURLOPT_FOLLOWLOCATION,
                           1L);
    if (code != CURLE_OK)
        fprintf(stderr, "Failed to set redirect option [%s]\n",
                errorBuffer);

    return false;

    code = curl_easy_setopt(conn, CURLOPT_WRITEFUNCTION,
                           writeFunction);
    if (code != CURLE_OK)
```

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# GENERAL INSTRUCTIONS

## **Technical organization:**

Submit your finished tasks to the GIT repository.  
<https://xteams-gitlab.unit.ua/module-N-login>

Only work submitted to the repository will be considered for mentor-evaluation. Any extraneous files will be considered against you if this is not justified by any serious cause.

## **Deadline:**

Access to the repository for making records closes after 7 days since tasks were presented at 09:01:00 AM GMT+2

XBIP: 7 - 18:03:2018 at 09:01:00 AM GMT+2

# INTRODUCTION

At this final week you will be given the opportunity to meet with another representative of the blockchain industry, the EOS project. The specific of EOS is that it uses delegated Proof-of-Stake consensus, and also allows you to write smart contracts.

## **Useful links**

api endpoint <https://eosbp.atticlab.net>  
Full documentation <https://developers.eos.io/>

For actions with a network, you can use both scatter and cleos

# PART 01: EOS Onboarding

Below there is a number of tasks that will help you to get a closer look at the EOS blockchain. Log the results in a separate LOG.md file, which you will add to your repository in the end.

## **Tasks list:**

- get chain\_id EOS
- generate a pair of keys (public private) (eosjs)
- get all Block Producers (BPs) in the network
- install scatter and cleos, create accounts in testnet (find a purse that supports testnet, find a way to create accounts in testnet, get yourself test EOS)
- find the top 21 (eos system table)
- vote for a pair of BP (copy the result of the action)
- calculate how much EOS gets per day top 3 BP
- find the formula for calculating the vote decay for the account
- create another permission for your own one (copy the result of the action)
- create Block Producer (copy the result of the action)
- API to find the action (get\_action) in which the transaction with the voice that you made in the task above
- find the top 10 largest proxies, find the weight of the voice in the top 10 proxies and the weight of the voice in all accounts that vote through a proxy

## **Prepare for the following theoretical questions:**

- What is the language of writing smart contracts for EOS
- What is Stake?
- What is a Vote decay?
- Who are Block Producers?
- What is dapps?
- Permission EOS? What are the standard ones?
- What is proxy accounts?

# PART 02: EOS development

To create applications on the EOS network, follow the instructions for developing smart contracts - <https://github.com/EOSIO/hackathon-howto-guide>. We also recommend you to learn about the principles of dApp on the EOS blockchain.

## **Practical tasks:**

Create an application that can show the position history of the BP (including the vote decay)

Create a simple game on EOS (any theme, it is up to you) example - <https://dappradar.com/rankings/protocol/eos>. The interface can be based on any solution, up to the interaction with logic through cli.