区块链搭链笔记

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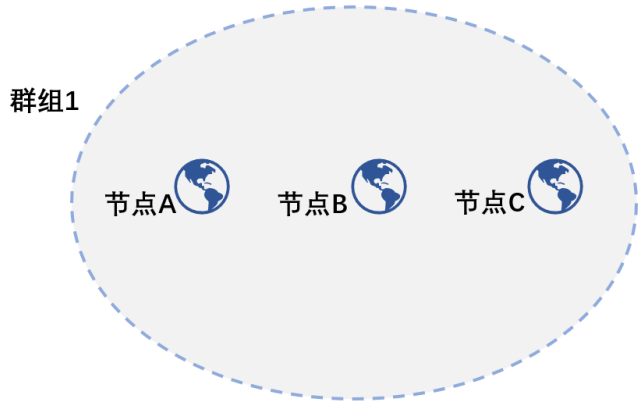
区块链搭链笔记

https://fisco-bcos-documentation.readthedocs.io/zh_CN/latest/docs/enterprise_tools/tutorial_one_click.html#id6
首先根据指示完成**下载安装**部分。
下面来看一下我们的节点组网拓扑结构，我们旨在建立一条**三服务器三节点单群组**的区块联盟链。



机器环境及每个节点的IP和端口号如下：

机构	节点	所属群组	P2P地址	RPC监听地址	Channel监听地址
机构A	节点0	群组1	172.24.234.83:30300	172.24.234.83:8545	0.0.0.0:20200
机构B	节点1	群组1	172.24.234.85:30301	172.24.234.85:8546	0.0.0.0:20201
机构C	节点2	群组1	172.24.234.84:30302	172.24.234.84:8547	0.0.0.0:20202

万分注意的一点就是每一个机构对应于一台服务器，IP地址为服务器内网IP地址。
接下来从**部署网络**开始，是建链的实战操作。

1：查看一键部署模板文件夹

```
cd ~/generator
ls ./tmp_one_click
```

注意：
为了适应自己的组网需求，在/tmp_one_click文件夹下面，新建了机构C。
mkdir agencyC
cp agencyA/node_deployment.ini agencyC/

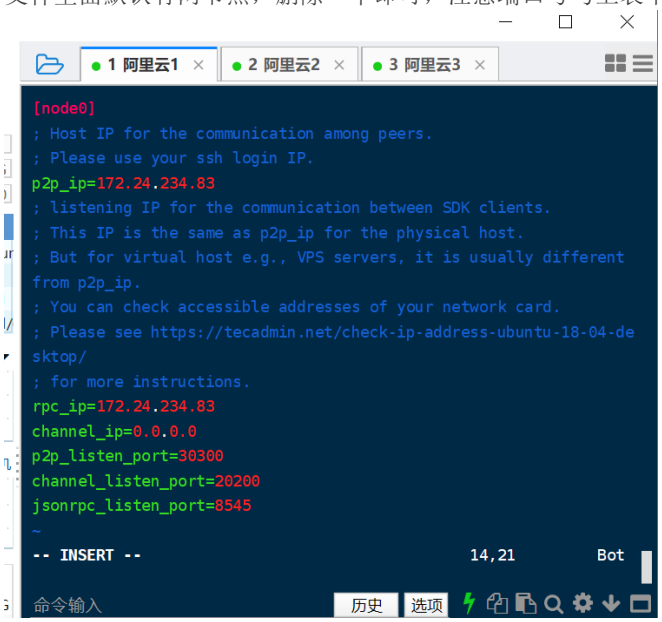
2：机构填写节点信息

机构A和机构B和机构C都只是一个节点，故配置文件按以下格式：

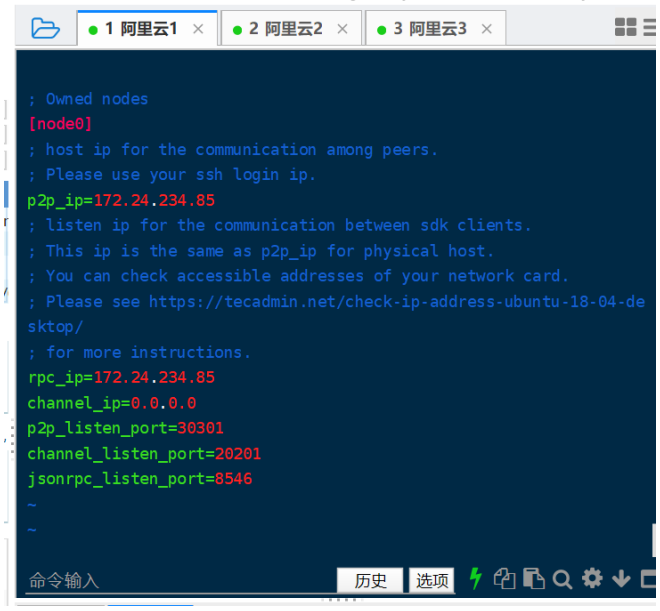
```
cat > ./tmp_one_click/agencyA/node_deployment.ini << EOF
[group]
group_id=1

[node0]
; Host IP for the communication among peers.
; Please use your ssh login IP.
p2p_ip=127.0.0.1
; listening IP for the communication between SDK clients.
; This IP is the same as p2p_ip for the physical host.
; But for virtual host e.g., VPS servers, it is usually different from p2p_ip.
; You can check accessible addresses of your network card.
; Please see https://tecadmin.net/check-ip-address-ubuntu-18-04-desktop/
; for more instructions.
rpc_ip=127.0.0.1
channel_ip=0.0.0.0
p2p_listen_port=30300
channel_listen_port=20200
jsonrpc_listen_port=8545
```

2.1: vi ./tmp_one_click/agencyA/node_deployment.ini

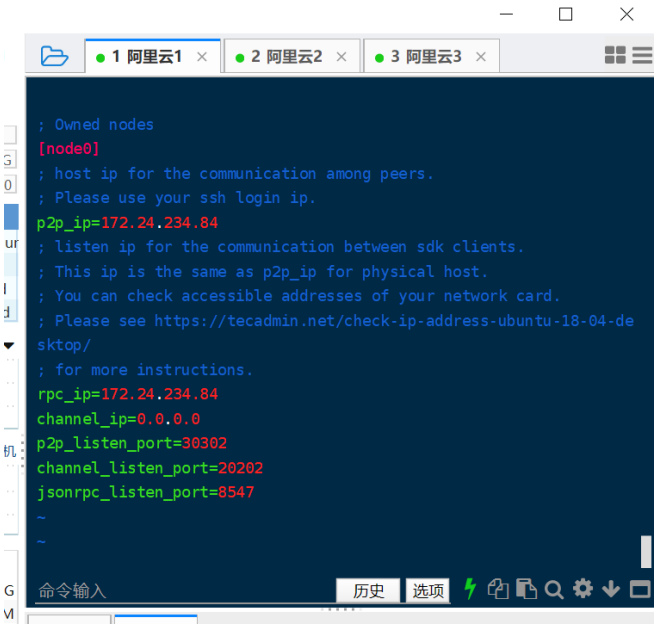
文件里面默认有两节点，删除一个即可，注意端口号与上表中项目的端口号一致



2.2: vi ./tmp_one_click/agencyB/node_deployment.ini

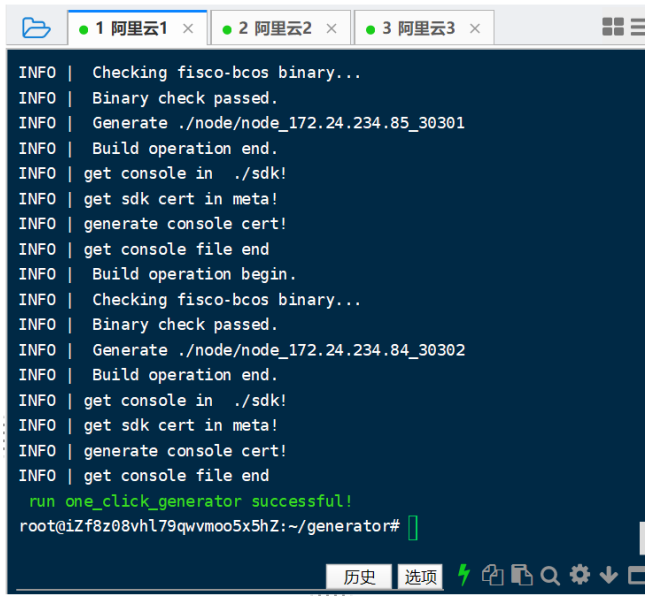


2.3: vi ./tmp_one_click/agencyC/node_deployment.ini



3：生成节点(生成全部节点，即node0、node1、node2)

```
bash ./one_click_generator.sh -b ./tmp_one_click
```



3.1：查看一下部署模板文件夹结构

```
ls ./tmp_one_click
```

ls ./tmp_one_click/agencyA/

```
root@iZf8z08vhl79qwvmoo5x5hZ:~/generator# ls ./tmp_one_click
agencyA  agencyC  ca.key  group.1.genesis
agencyB  ca.crt   ca.srl  peers.txt
root@iZf8z08vhl79qwvmoo5x5hZ:~/generator# ls ./tmp_one_click/agenc
yA/
agency_cert  generator-agency  node  node_deployment.ini  sdk
```

4：推送agencyB和agencyC到其他物理机

4.1：scp -r agencyB/ root@172.24.234.85:~/

4.2：scp -r agencyC/ root@172.24.234.84:~/

172是机构B/C的物理IP

5：启动节点(A/B/C一样，以C为例。)

cd ~/agencyC/node

./start_all.sh

```
root@iZf8z08vhl79qwvmoo5x5hZ:~/generator# bash ./tmp_one_click/age
ncyA/node/start_all.sh
try to start node_172.24.234.83_30300
 node_172.24.234.83_30300 start successfully
root@iZf8ze76gcpdjo4r6nssvgZ:~/agencyB/node# ./start_all.sh
try to start node_172.24.234.85_30301
 node_172.24.234.85_30301 start successfully
root@iZf8ze76gcpdjo4r6nssvgZ:~/agencyB/node#
(base) root@iZf8ze76gcpdjo4r6nssvfZ:~/agencyC/node# ./start_all.sh

try to start node_172.24.234.84_30302
 node_172.24.234.84_30302 start successfully
(base) root@iZf8ze76gcpdjo4r6nssvfZ:~/agencyC/node#
```

6：部署控制台

一条链可以有多个控制台，但是没必要每个服务器上都部署，这里为了验证共识，在机构A/B上部署控制台。

6.1：进入机构的/generator-agency文件夹

6.1.1：机构A

```
cd ~/generator/tmp_one_click/agencyA/generator-agency
```

6.1.2：机构B

```
cd ~/agencyB/generator-agency
```

6.2：拉取控制台

```
./generator --download_console ./ --cdn
```

6.3：启动控制台

6.3.1：机构A

```
cd ~/generator/tmp_one_click/agencyA/generator-agency/console && bash ./start.sh 1
```

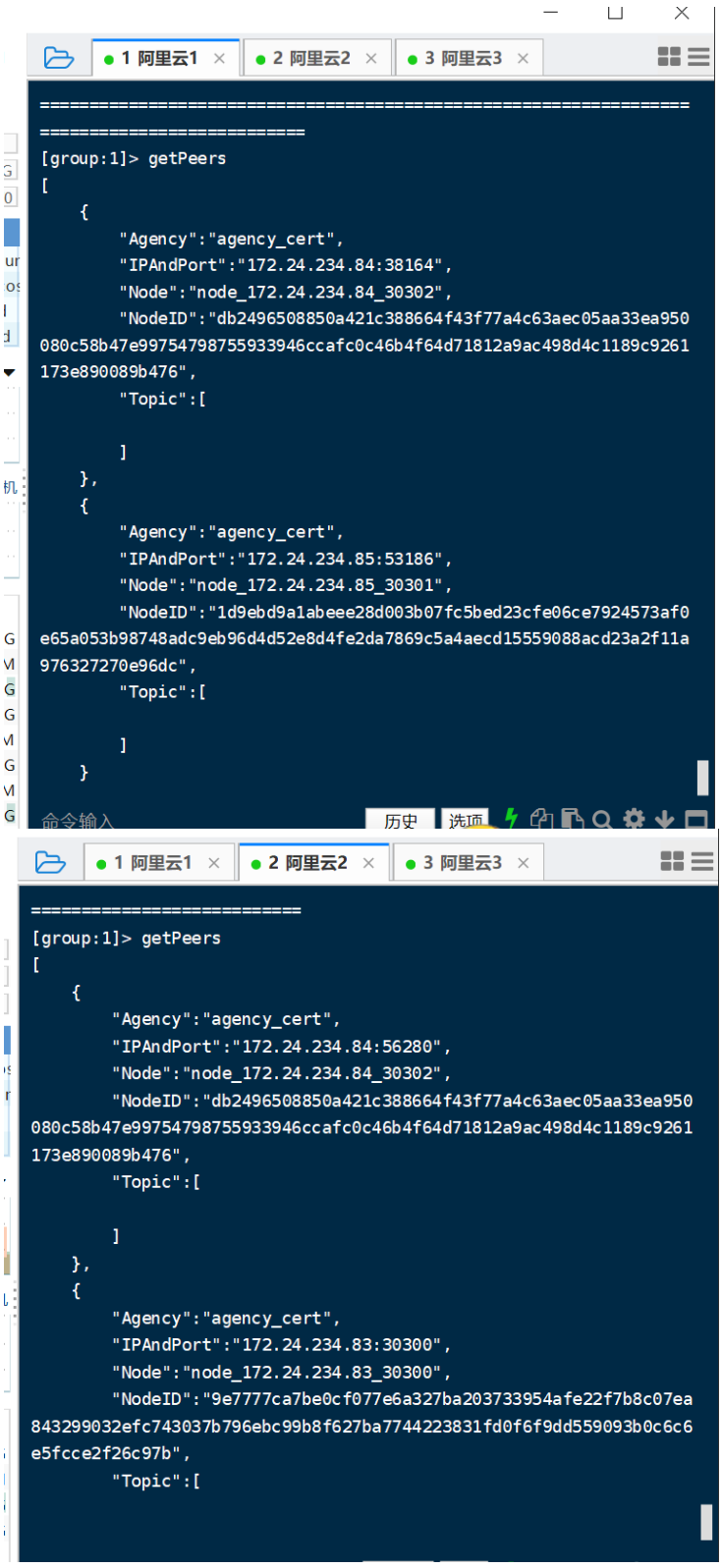
6.3.1：机构B

```
cd ~/agencyB/generator-agency/console && bash ./start.sh 1
```

此处的命令的末尾的1是指群组1

7：控制台查看链内节点

getPeers



三服务器三节点单群组的区块联盟链搭链成功~~