xquant： 【终版】整体编译运行+服务器nginx配置

1. 参考 xuqant-etcenv目录下的readme.md

- http://192.168.1.26/
- bb && ./broadcase
- rr && ./tmain.x

2. linux git 配置

```
export PS1="\[\e[37;40m\][\[\e[32;40m\]\u\[\e[31;40m\] @ \h \[\e[32;40m\]\w\[\e[0m\]] $ "
TZ='Asia/Shanghai'; export TZ
export VERSION=v18.16.1
export DISTRO=linux-x64
git config --global http.proxy "192.168.1.88:23457"
# git config --global http.version HTTP/1.1
git config --global http.postBuffer 524288000
export HTTP_PROXY=http://192.168.1.88:23457
export HTTPS_PROXY=http://192.168.1.88:23457
export PATH=$PATH:/usr/local/go/bin
~



~
```

3. 从github上下载：

```
git clone https://github.com/asialiugf/xquant.git
```

修改.git/config，增加 gitee.com 的url：

保证在新的服务器上对xquant的修改可以上传到github和gitee

```
[core]
        repositoryformatversion = 0
        filemode = true
        bare = false
        logallrefupdates = true
[remote "origin"]
        url = https://github.com/asialiugf/xquant.git
        url = https://gitee.com/asialiugf/xquant.git
        fetch = +refs/heads/*:refs/remotes/origin/*
[branch "master"]
        remote = origin
        merge = refs/heads/master
```

4. 下载 uws-legacy，

```
git clone --recursive https://github.com/uNetworking/uws-legacy.git
```

注意要recursive下载到 老版本的 uWebSockets/ v0.14.8版。

在/xquant/uquant/extern/中也有备份：uws-legacy.tar.20231203.gz

5. 编译 老版本的 uWebSockets/ v0.14.8版

```
cd uws-legacy/uWebSockets
make
sudo make install
```

```
root@vincent:/home/rabbit/uws-legacy/uWebSockets# make install
make install`(uname -s)`
make[1]: 进入目录“/home/rabbit/uws-legacy/uWebSockets”
if [ -d "/usr/lib64" ]; then mkdir -p /usr/lib64 && cp libuWS.so /usr/lib64/; else mkdir -p /usr/lib && cp libuWS.so /usr/lib/; fi
mkdir -p /usr/include/uWS
cp src/*.h /usr/include/uWS/
make[1]: 离开目录“/home/rabbit/uws-legacy/uWebSockets”
root@vincent:/home/rabbit/uws-legacy/uWebSockets#
```

6. 安装 google-glog日志库

此处为语雀内容卡片，点击链接查看：
https://www.yuque.com/asialine/fo2koz/nskqca5d7dn7eo2d?view=doc_embed&inner=iuzz3

```
git clone https://github.com/google/glog.git
cd glog
mkdir build
cd build
cmake ..
make
sudo make install
```

7. 安装googletest安装

此处为语雀内容卡片，点击链接查看：
https://www.yuque.com/asialine/fo2koz/nskqca5d7dn7eo2d?view=doc_embed&inner=iuzz3

```
 git clone https://github.com/google/googletest
cd googletest
mkdir build
cd build
cmake ..
make
sudo make install
```

8. 新版 uWebsokets+uSockets 集成

Build software better, together

将 uWebsokets+uSockets 放在 uquant/目录下

8.1.1. 在uSockets目录下执行 make

- 生成 uSockets.a ， 将其改名为libuSockets.a
- 将 uSockets/src/libusockets.h copy 到 /usr/inlcude下

9. .bashrc中添加LD_LIBRARY_PATH

uWs.so + glog.so

```
export LD_LIBRARY_PATH=$LD_LIBRARY_PATH:/usr/lib64:/usr/local/lib
```

运行环境准备

~/tdx_data 下放置数据文件：

abbit@vincent:~/xquant/trader/run$ mkdir tbl

```
rabbit@vincent:~/xquant/trader/run$ mkdir tbl
rabbit@vincent:~/xquant/trader/run$ mkdir log
rabbit@vincent:~/xquant/uquant/tests/mock/tbl$ cp trade.json ~/xquant/trade
r/run/tbl
```

10. 远程服务器 开启防火墙

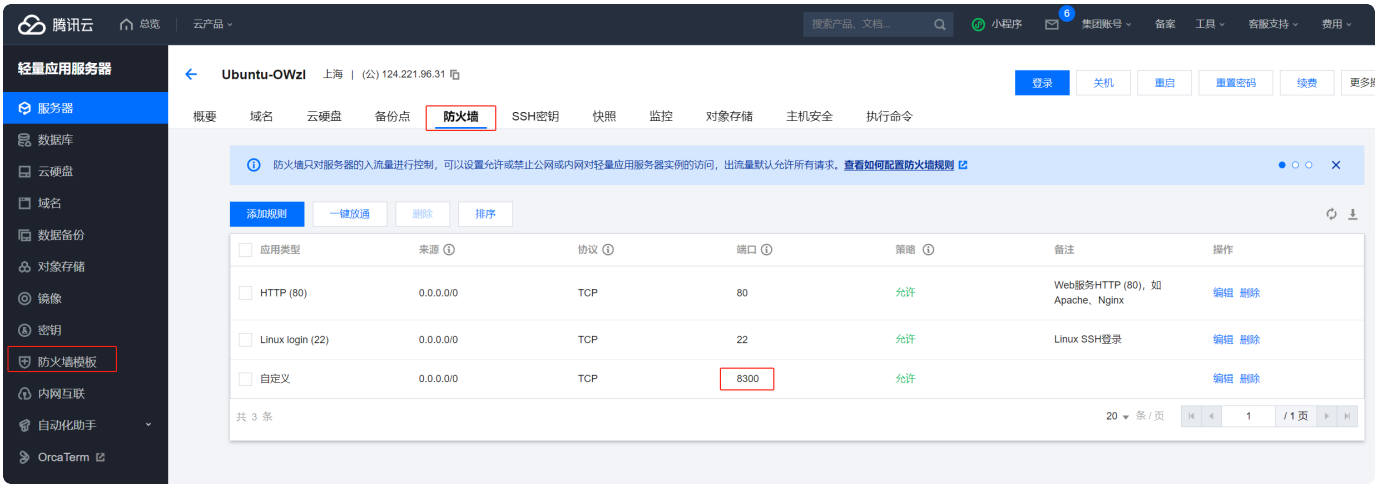
```
 [root @ vincent ~] # ufw status
 状态: 不活动
 [root @ vincent ~] #
 [root @ vincent ~] #
 [root @ vincent ~] #
 [root @ vincent ~] # ufw allow 9001
 防火墙规则已更新
 规则已更新(v6)
 [root @ vincent ~] #
 [root @ vincent ~] # ufw status
 状态: 不活动
 [root @ vincent ~] #
 [root @ vincent ~] # ufw enable
 在系统启动时启用和激活防火墙
 [root @ vincent ~] # ufw status
 状态:  激活

 至                          动作          来自
 -                          --          --
 9001                       ALLOW       Anywhere
 9001 (v6)                  ALLOW       Anywhere (v6)

 [root @ vincent ~] #
 [root @ vincent ~] #
```

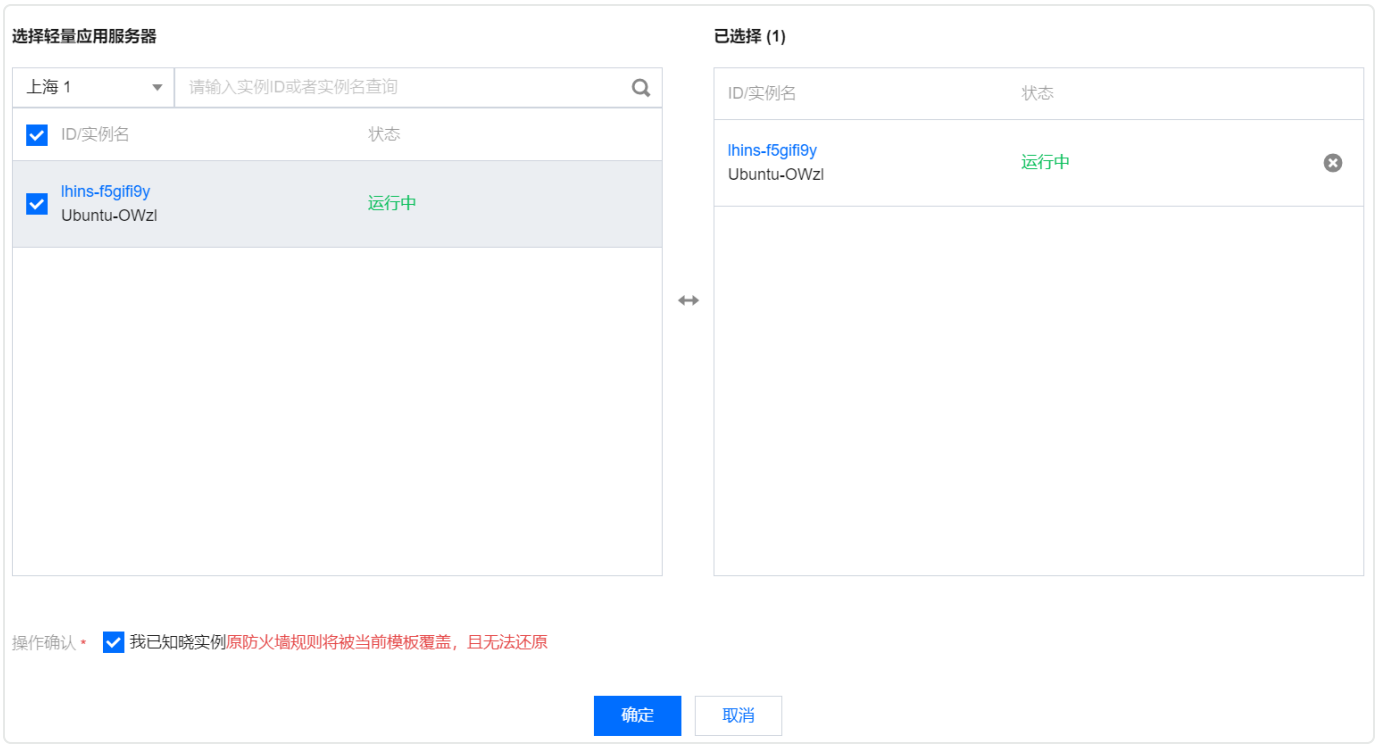
腾讯云 采用

10.1.1.1. VNC登录

11. 远程websocket nginx配置

11.1. 腾讯云的配置





```
ufw enable
ufw allow ssh
ufw allow 80
ufw allow 8300
ufw allow 9001
```

11.2. nginx配置

```
 service nginx stop
 service nginx start
```

 NGINX as a Proxy for Websockets | Mike Polinowski

此处为语雀内容卡片，点击链接查看：https://www.yuque.com/asialine/fo2koz/7eb0d1ff-0f20-4155-8454-faec83d9486f?view=doc_embed

```
apt install nginx
service nginx restart
cd /etc/nginx
vi nginx.conf
```

11.2.1. websocket 代理配置

`/etc/nginx/nginx.conf`

外网 8300 内网9001

```
    map $http_upgrade $connection_upgrade {
        default upgrade;
        '' close;
    }

    upstream websocket {
        server localhost:9001;
    }

    server {
        listen 8300;
        location / {
            proxy_pass http://websocket;
            proxy_http_version 1.1;
            proxy_set_header Upgrade $http_upgrade;
            proxy_set_header Connection $connection_upgrade;
            proxy_set_header Host $host;
        }
    }
```

11.2.2. 80端口的默认路径配置

在nginx.conf文件中有两句配置：

```
        include /etc/nginx/conf.d/*.conf;
        include /etc/nginx/sites-enabled/*;
```

在 `/etc/nginx/sites-enabled`]# 目录下修改：

lrwxrwxrwx 1 root root 34 Dec 3 20:14 default -> /etc/nginx/sites-available/default

要注意 /home/rabbit目录要有读写权限

```
server {
        listen 80 default_server;
        listen [::]:80 default_server;

        # root /var/www/html;
        root /home/rabbit/xquant/website/chart;

```

用 nc查看 8300端口对 外网IP不通，所以需要在腾讯云上开放此端口

```
[root @ vincent /etc/nginx] #
[root @ vincent /etc/nginx] # nc -zvw3 127.0.0.1 9001
Connection to 127.0.0.1 9001 port [tcp/*] succeeded!
[root @ vincent /etc/nginx] # nc -zvw3 127.0.0.1 8300
Connection to 127.0.0.1 8300 port [tcp/*] succeeded!
[root @ vincent /etc/nginx] #
[root @ vincent /etc/nginx] # nc -zvw3 127.0.0.1 8300
Connection to 127.0.0.1 8300 port [tcp/*] succeeded!
[root @ vincent /etc/nginx] #
[root @ vincent /etc/nginx] # nc -zvw3 124.221.96.31 8300
nc: connect to 124.221.96.31 port 8300 (tcp) timed out: Operation now in p
rogress
[root @ vincent /etc/nginx] #
```

11.3. `client` 中的代码：

`kd_2023_01_k3_color_ok.html`

```
let socket = new WebSocket('ws://124.221.96.31:8300/');
```

11.4. nginx.conf 完整配置

```
rabbit@vincent:~$ cat /etc/nginx/nginx.conf
user www-data;
worker_processes auto;
pid /run/nginx.pid;
include /etc/nginx/modules-enabled/*.conf;

events {
        worker_connections 768;
        # multi_accept on;
}

http {

        ##
        # Basic Settings
        ##

        sendfile on;
        tcp_nopush on;
        types_hash_max_size 2048;
        # server_tokens off;

        # server_names_hash_bucket_size 64;
        # server_name_in_redirect off;


    map $http_upgrade $connection_upgrade {
        default upgrade;
        '' close;
    }

    upstream websocket {
        server localhost:9001;
    }

    server {
        listen 8300;
        location / {
            proxy_pass http://websocket;
            proxy_http_version 1.1;
            proxy_set_header Upgrade $http_upgrade;
            proxy_set_header Connection $connection_upgrade;
            proxy_set_header Host $host;
        }
    }

```

```
47
48          include /etc/nginx/mime.types;
49          default_type application/octet-stream;
50
51          ##
52          # SSL Settings
53          ##
54
55          ssl_protocols TLSv1 TLSv1.1 TLSv1.2 TLSv1.3; # Dropping SSLv3, re
    f: POODLE
56          ssl_prefer_server_ciphers on;
57
58          ##
59          # Logging Settings
60          ##
61
62          access_log /var/log/nginx/access.log;
63          error_log /var/log/nginx/error.log;
64
65          ##
66          # Gzip Settings
67          ##
68
69          gzip on;
70
71          # gzip_vary on;
72          # gzip_proxied any;
73          # gzip_comp_level 6;
74          # gzip_buffers 16 8k;
75          # gzip_http_version 1.1;
76          # gzip_types text/plain text/css application/json application/jav
    ascript text/xml application/xml application/xml+rss text/javascript;
77
78          ##
79          # Virtual Host Configs
80          ##
81
82          include /etc/nginx/conf.d/*.conf;
83          include /etc/nginx/sites-enabled/*;
84
85  }
86
87
88  #mail {
89  #       # See sample authentication script at:
90  #       # http://wiki.nginx.org/ImapAuthenticateWithApachePhpScript
91  #
```

```
92  #       # auth_http localhost/auth.php;
93  #       # pop3_capabilities "TOP" "USER";
94  #       # imap_capabilities "IMAP4rev1" "UIDPLUS";
95  #
96  #       server {
97  #               listen     localhost:110;
98  #               protocol   pop3;
99  #               proxy      on;
100 #       }
101 #
102 #       server {
103 #               listen     localhost:143;
104 #               protocol   imap;
105 #               proxy      on;
106 #       }
107 #}
```

11.5. default配置

```
rabbit@vincent:~$ cd /etc/nginx/sites-available/
rabbit@vincent:/etc/nginx/sites-available$ ll
总计 12
drwxr-xr-x 2 root root 4096 Dec  4 12:35 ./
drwxr-xr-x 8 root root 4096 Dec  4 12:18 ../
-rw-r--r-- 1 root root 2523 Dec  4 12:35 default
rabbit@vincent:/etc/nginx/sites-available$
rabbit@vincent:/etc/nginx/sites-available$
rabbit@vincent:/etc/nginx/sites-available$ cat *
##
# You should look at the following URL's in order to grasp a solid unders
tanding
# of Nginx configuration files in order to fully unleash the power of Ngi
nx.
# https://www.nginx.com/resources/wiki/start/
# https://www.nginx.com/resources/wiki/start/topics/tutorials/config_pitf
alls/
# https://wiki.debian.org/Nginx/DirectoryStructure
#
# In most cases, administrators will remove this file from sites-enable
d/ and
# leave it as reference inside of sites-available where it will continue
to be
# updated by the nginx packaging team.
#
# This file will automatically load configuration files provided by other
# applications, such as Drupal or Wordpress. These applications will be m
ade
# available underneath a path with that package name, such as /drupal8.
#
# Please see /usr/share/doc/nginx-doc/examples/ for more detailed example
s.
##

# Default server configuration
#
server {
        listen 80 default_server;
        listen [::]:80 default_server;

        # SSL configuration
        #
        # listen 443 ssl default_server;
        # listen [::]:443 ssl default_server;
        #
        # Note: You should disable gzip for SSL traffic.
```

```
        # See: https://bugs.debian.org/773332
        #
        # Read up on ssl_ciphers to ensure a secure configuration.
        # See: https://bugs.debian.org/765782
        #
        # Self signed certs generated by the ssl-cert package
        # Don't use them in a production server!
        #
        # include snippets/snakeoil.conf;

        # root /var/www/html;
        # root /home/rabbit/ht;
        # root /home/rabbit/xquant/website/chart;
        root /home/rabbit/xquant/website/chart;

        # Add index.php to the list if you are using PHP
        index index.html index.htm index.nginx-debian.html;

        server_name _;

        location / {
                # First attempt to serve request as file, then
                # as directory, then fall back to displaying a 404.
                try_files $uri $uri/ =404;
        }

        # pass PHP scripts to FastCGI server
        #
        #location ~ \.php$ {
        #       include snippets/fastcgi-php.conf;
        #
        #       # With php-fpm (or other unix sockets):
        #       fastcgi_pass unix:/run/php/php7.4-fpm.sock;
        #       # With php-cgi (or other tcp sockets):
        #       fastcgi_pass 127.0.0.1:9000;
        #}

        # deny access to .htaccess files, if Apache's document root
        # concurs with nginx's one
        #
        #location ~ /\.ht {
        #       deny all;
        #}
}


# Virtual Host configuration for example.com
```

```
87   #
88   # You can move that to a different file under sites-available/ and symlin
     k that
89   # to sites-enabled/ to enable it.
90   #
91   #server {
92   #       listen 80;
93   #       listen [::]:80;
94   #
95   #       server_name example.com;
96   #
97   #       root /var/www/example.com;
98   #       index index.html;
99   #
100  #       location / {
101  #               try_files $uri $uri/ =404;
102  #       }
103  #}
```

12. 腾讯云连接不了github

https://www.itbulu.com/git-github-outtime.html

在 /etc/hosts中加下以下：

```
1   192.30.255.112 github.com
2   192.30.255.112 raw.githubusercontent.com
```