

配制sylar环境

先说明一下，我用的腾讯云服务器，ubuntu 22.04
更推荐用windwos 的WSL， 下载Ubuntu 22.04

sylar : github地址: <https://github.com/sylar-yin/sylar>

先查看CMakeLists.txt文件，确认需要的库是否都已经安装，如果没有安装，则先安装。

SYLAR [SSH: TENCENT]

CMakeLists.txt

```
133 find_library(PTHREAD pthread)
134 #set(LIBS ${LIBS} sylar)
135 #set(LIBS ${LIBS} dl)
136 #set(LIBS ${LIBS} ${YAMLCPP})
137 #set(LIBS ${LIBS} ${PTHREAD})
138
139 set(LIBS
140     sylar
141     dl
142     pthread
143     yaml-cpp
144     jsoncpp
145     ${ZLIB_LIBRARIES}
146     ${OPENSSL_LIBRARIES}
147     ${PROTOBUF_LIBRARIES}
148     event
149     hiredis_vip
150     mysqlclient_r
151     zookeeper_mt
152     sqlite3
153     tinyxml2
154     jemalloc
155
156     sylar_add_executable(test_util "tests/test_util.cc" sylar "${LIBS}")
157     sylar_add_executable(test_hashmultimap "tests/test_hashmultimap.cc" sylar "${LIBS}")
158     sylar_add_executable(test_hashmap "tests/test_hashmap.cc" sylar "${LIBS}")
159     sylar_add_executable(test_dict "tests/test_dict.cc" sylar "${LIBS}")
160     sylar_add_executable(test_array "tests/test_array.cc" sylar "${LIBS}")
```

输出 调试控制台 终端 窗口

root@VM-20-2-ubuntu:/home/coding/git_pros/sylar#

把sylar的部分路径记得替换掉，比如我默认安装的路径是：

/usr/include
/usr/lib
/usr/lib64

```
include_directories(..)
include_directories(/apps/sylar/include)
#include_directories(${CMAKE_CURRENT_SOURCE_DIR}/thirdpart)
#include_directories(${CMAKE_CURRENT_SOURCE_DIR}/thirdpart/yaml-cpp/include)
#include_directories(${CMAKE_CURRENT_SOURCE_DIR}/thirdpart/jsoncpp-1.8.4/include)
#include_directories(${CMAKE_CURRENT_SOURCE_DIR}/thirdpart/sqlite-3.28.0)
#include_directories(${CMAKE_CURRENT_SOURCE_DIR}/thirdpart/tinyxml2-7.0.1)
link_directories(/apps/sylar/lib)
link_directories(/apps/sylar/lib64)
```

这里是我自己的路径，你需要替换成自己的路径

```
include_directories(/usr/include)
link_directories(/usr/lib)
link_directories(/usr/lib64)
```

1.安装Boost库

这里我习惯安装boost的全部库，即libboost-all-dev，可以只选择安装你需要的库。

```
apt install libboost-all-dev
```

2.json-cpp安装

直接安装开发包

```
apt install libjsoncpp-dev
```

源码编译安装

克隆 `json-cpp` 仓库：

```
sh  
  
git clone https://github.com/open-source-parsers/jsoncpp.git  
cd jsoncpp
```

创建构建目录并编译：

```
sh  
  
mkdir build  
cd build  
cmake ..  
make
```

4. 安装ragel

ragel是一个状态机生成器，用于生成状态机代码，可以用来解析协议。
sylar使用ragel来解析http协议(http_parser.rl/...)，所以需要安装ragel。

```
apt install ragel
```

yaml-cpp安装

github上clone下来，编译安装

```

root@VM-20-2-ubuntu:/home/coding/tools# git clone https://github.com/jbeder/yaml-cpp.git
Cloning into 'yaml-cpp'...
remote: Enumerating objects: 8757, done.
remote: Receiving objects: 97% (8535/8757), 3.80 MiB | 23.00 KiB/s
remote: Total 8757 (delta 0), reused 0 (delta 0), pack-reused 8757
Receiving objects: 100% (8757/8757), 4.35 MiB | 25.00 KiB/s, done.
Resolving deltas: 100% (5699/5699), done.
root@VM-20-2-ubuntu:/home/coding/tools# cd yaml-cpp/
root@VM-20-2-ubuntu:/home/coding/tools/yaml-cpp# mkdir build && cd build
root@VM-20-2-ubuntu:/home/coding/tools/yaml-cpp/build# cmake ..
-- The CXX compiler identification is GNU 11.2.0
-- Detecting CXX compiler ABI info
-- Detecting CXX compiler ABI info - done
-- Check for working CXX compiler: /usr/bin/c++ - skipped
-- Detecting CXX compile features
-- Detecting CXX compile features - done
-- Configuring done
-- Generating done
-- Build files have been written to: /home/coding/tools/yaml-cpp/build
root@VM-20-2-ubuntu:/home/coding/tools/yaml-cpp/build# make && make install
[ 2K] Building CXX object CMakeFiles/yaml-cpp.dir/src/contrib/graphbuilder.cpp.o
[ 5K] Building CXX object CMakeFiles/yaml-cpp.dir/src/contrib/graphbuilderadapter.cpp.o
[ 7K] Building CXX object CMakeFiles/yaml-cpp.dir/src/binary.cpp.o
[ 10K] Building CXX object CMakeFiles/yaml-cpp.dir/src/convert.cpp.o
[ 13K] Building CXX object CMakeFiles/yaml-cpp.dir/src/depthguard.cpp.o
[ 15K] Building CXX object CMakeFiles/yaml-cpp.dir/src/directives.cpp.o
[ 18K] Building CXX object CMakeFiles/yaml-cpp.dir/src/emit.cpp.o
[ 21K] Building CXX object CMakeFiles/yaml-cpp.dir/src/emitfromevents.cpp.o
[ 23K] Building CXX object CMakeFiles/yaml-cpp.dir/src/emitter.cpp.o
[ 26K] Building CXX object CMakeFiles/yaml-cpp.dir/src/emitterstate.cpp.o
[ 28K] Building CXX object CMakeFiles/yaml-cpp.dir/src/emitterutils.cpp.o
[ 31K] Building CXX object CMakeFiles/yaml-cpp.dir/src/exceptions.cpp.o
[ 34K] Building CXX object CMakeFiles/yaml-cpp.dir/src/exp.cpp.o
[ 36K] Building CXX object CMakeFiles/yaml-cpp.dir/src/memory.cpp.o
[ 39K] Building CXX object CMakeFiles/yaml-cpp.dir/src/node.cpp.o
[ 42K] Building CXX object CMakeFiles/yaml-cpp.dir/src/node_data.cpp.o
[ 44K] Building CXX object CMakeFiles/yaml-cpp.dir/src/nodebuilder.cpp.o
[ 47K] Building CXX object CMakeFiles/yaml-cpp.dir/src/nodeevents.cpp.o
[ 50K] Building CXX object CMakeFiles/yaml-cpp.dir/src/null.cpp.o
[ 52K] Building CXX object CMakeFiles/yaml-cpp.dir/src/ostream_wrapper.cpp.o
[ 55K] Building CXX object CMakeFiles/yaml-cpp.dir/src/parse.cpp.o
[ 57K] Building CXX object CMakeFiles/yaml-cpp.dir/src/parser.cpp.o
[ 60K] Building CXX object CMakeFiles/yaml-cpp.dir/src/regex_yaml.cpp.o
[ 63K] Building CXX object CMakeFiles/yaml-cpp.dir/src/scanner.cpp.o
[ 65K] Building CXX object CMakeFiles/yaml-cpp.dir/src/scanscalar.cpp.o
[ 68K] Building CXX object CMakeFiles/yaml-cpp.dir/src/scantag.cpp.o
[ 71K] Building CXX object CMakeFiles/yaml-cpp.dir/src/scantoken.cpp.o
[ 73K] Building CXX object CMakeFiles/yaml-cpp.dir/src/simplekey.cpp.o
[ 76K] Building CXX object CMakeFiles/yaml-cpp.dir/src/singledocparser.cpp.o

```

```

git clone https://github.com/jbeder/yaml-cpp.git
cd yaml-cpp
mkdir build
cd build
cmake ..
make
make install

```

查看是否安装成功

```

root@VM-20-2-ubuntu:/home/coding/tools/yaml-cpp/build# ls /usr/local/lib | grep yaml-cpp
libyaml-cpp.a
root@VM-20-2-ubuntu:/home/coding/tools/yaml-cpp/build#

```

5. mysql-client安装

```
apt install libmysqlclient-dev
```

装一下mysql-server安装顺便配置一下，这里不多说。

6.sqlite3安装

```
apt install sqlite3 libsqlite3-dev
```

redis安装

```
apt install redis-server
```

安装hiredis的一个依赖

```
apt install build-essential
```

7.hiredis-vip安装

源码编译安装

```
git clone https://github.com/vipshop/hiredis-vip.git  
cd hiredis-vip  
make  
make install
```

8.libevent安装

```
apt install libevent-dev
```

9.protobuf安装

```
apt install libprotobuf-dev protobuf-compiler
```

10.安装openssl

```
apt install libssl-dev
```

这里也可以去找其他版本的openssl,然后编译安装

11. 安装 tinyxml2

```
apt install libtinyxml2-dev
```

12. 安装jemalloc

```
apt install libjemalloc-dev
```

13. 安装zookeeper

这里比较困难，我看很多人都在这些里面踩坑。

安装libzookeeper_mt-dev 后去直接编译sylar可能出现错误，zookeeper的版本过低，apt/yun源里安装的zookeeper版本是3.4.13

sylar要求zookeeper版本是3.7.0合适，所以需要自己编译安装zookeeper

具体可以去github上查看issues，我也是在上面看的版本问题

zookeeper这里我是在github上clone下来的，然后编译安装的

```
git clone https://github.com/apache/zookeeper.git  
cd zookeeper
```

这里我用到了cppunit

克降下来后，进入目录。

执行

```
bot@VM-20-2-ubuntu:/home/coding/tools/zookeeper# git clone https://github.com/hvoigt/cppunit.git
Cloning into 'cppunit'...
remote: Enumerating objects: 6510, done.
remote: Total 6510 (delta 0), reused 0 (delta 0), pack-reused 6510
Receiving objects: 100% (6510/6510), 1.50 MiB | 2.73 MiB/s, done.
Resolving deltas: 100% (4857/4857), done.
bot@VM-20-2-ubuntu:/home/coding/tools/zookeeper# ls
bin          dev           LICENSE.txt      tools          zookeeper-docs      zookeeper-specifications
checkstyle-simple.xml excludeFindBugsFilter.xml NOTICE.txt    zk-merge-pr.py    zookeeper-it
checkstyle-strict.xml Jenkinsfile        owaspSuppressions.xml zookeeper-assembly  zookeeper-jute
checkstyleSuppressions.xml Jenkinsfile-owasp pom.xml       zookeeper-client   zookeeper-metrics-providers
conf          Jenkinsfile-PreCommit README.md    zookeeper-compatibility-tests  zookeeper-recipes
cppunit      Jenkinsfile-s390x  README packaging.md  zookeeper-contrib  zookeeper-server
```

注意 这里面有个cppunit.m4文件,后面会用到

```
输出 调试控制台 端口 + × bash - cppunit
root@VM-20-2-ubuntu:/home/coding/tools/zookeeper/cppunit# ls
aclocal.m4      BUGS          config       contrib      cppunit.m4      devtools    INSTALL-unix      libtool      README      TODO
AUTHORS        Build2010.sln   config.log    COPYING      cppunit.pc      doc         INSTALL-VS2010.txt  Makefile    README.CVS
autogen.sh      BuildVS2010.bat config.status  cppunit-config  cppunit.pc.in  examples    INSTALL-VS.Net2008.txt  Makefile.am  README.sourceforge
autom4te.cache  ChangeLog     configure    cppunit-config.1  cppunit.spec   include     INSTALL-WIN32.txt  Makefile.in  src
autoconf.sh     CodingGuideLines.txt  configure.in  cppunit-config.in  cppunit.spec.in  INSTALL    lib          NEWS        THANKS
root@VM-20-2-ubuntu:/home/coding/tools/zookeeper/cppunit# ls *m4
aclocal.m4      cppunit.m4
root@VM-20-2-ubuntu:/home/coding/tools/zookeeper/cppunit#
```

```
./autogen.sh  
./configure  
make && make install
```

[回到zookeeper目录](#)

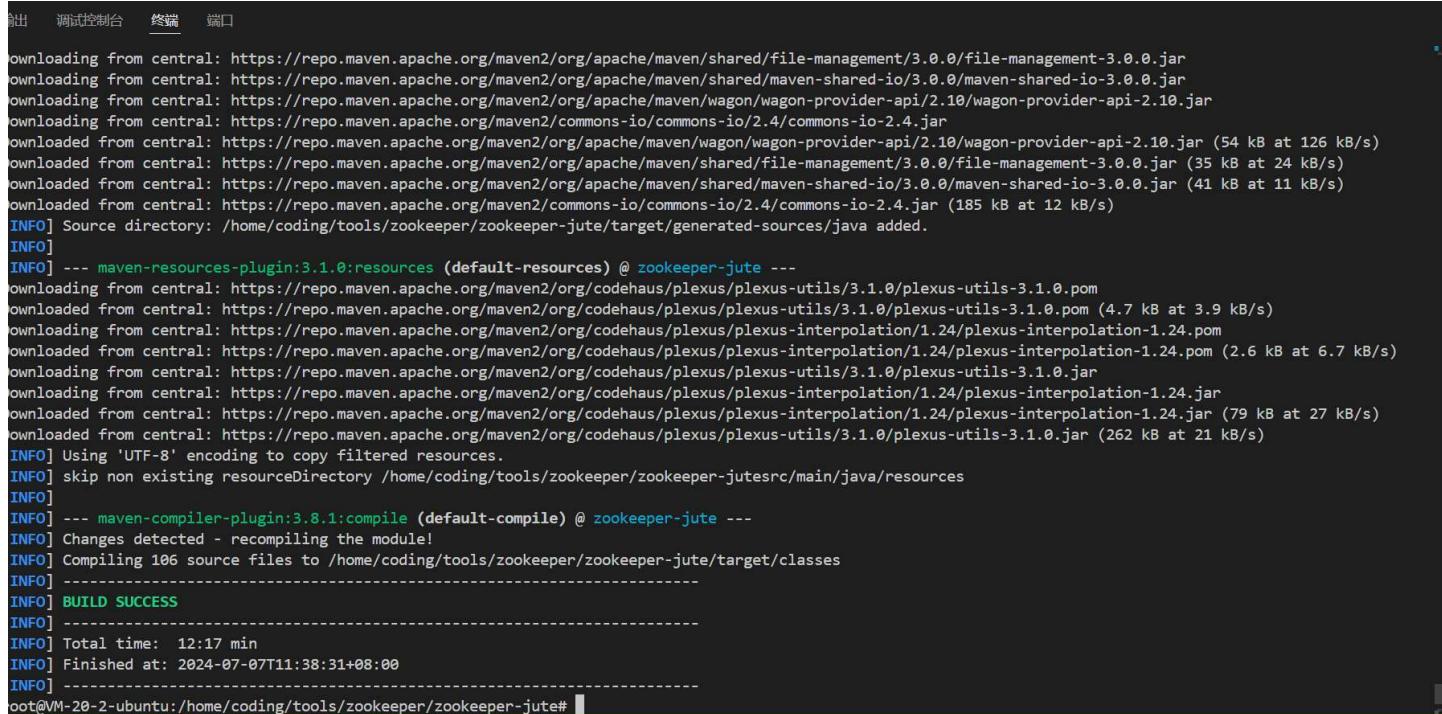
进入zookeeper-jute目录，执行mvn compile命令进行编译

(这里需要jdk环境和maven)

```
root@VM-20-2-ubuntu:/home/coding/tools/zookeeper# cd zookeeper-jute/
root@VM-20-2-ubuntu:/home/coding/tools/zookeeper/zookeeper-jute# mvn compile
[INFO] Scanning for projects...
Downloading from central: https://repo.maven.apache.org/maven2/org/apache/apache/23/apache-23.pom
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/apache/23/apache-23.pom (18 kB at 3.6 kB/s)
Downloading from central: https://repo.maven.apache.org/maven2/io/netty/netty-bom/4.1.105.Final/netty-bom-4.1.105.Final.pom
Progress (1): 14 kB
```

```
cd zookeeper-jute
mvn compile
```

成功会显示



```
输出 调试控制台 终端 端口

ownloading from central: https://repo.maven.apache.org/maven2/org/apache/maven/shared/file-management/3.0.0/file-management-3.0.0.jar
ownloading from central: https://repo.maven.apache.org/maven2/org/apache/maven/shared/maven-shared-io/3.0.0/maven-shared-io-3.0.0.jar
ownloading from central: https://repo.maven.apache.org/maven2/org/apache/maven/wagon/wagon-provider-api/2.10/wagon-provider-api-2.10.jar
ownloading from central: https://repo.maven.apache.org/maven2/commons-io/commons-io/2.4/commons-io-2.4.jar
ownloaded from central: https://repo.maven.apache.org/maven2/org/apache/maven/wagon/wagon-provider-api/2.10/wagon-provider-api-2.10.jar (54 kB at 126 kB/s)
ownloaded from central: https://repo.maven.apache.org/maven2/org/apache/maven/shared/file-management/3.0.0/file-management-3.0.0.jar (35 kB at 24 kB/s)
ownloaded from central: https://repo.maven.apache.org/maven2/org/apache/maven/shared/maven-shared-io/3.0.0/maven-shared-io-3.0.0.jar (41 kB at 11 kB/s)
ownloaded from central: https://repo.maven.apache.org/maven2/commons-io/commons-io/2.4/commons-io-2.4.jar (185 kB at 12 kB/s)
[INFO] Source directory: /home/coding/tools/zookeeper/zookeeper-jute/target/generated-sources/java added.
[INFO]
[INFO] --- maven-resources-plugin:3.1.0:resources (default-resources) @ zookeeper-jute ---
ownloading from central: https://repo.maven.apache.org/maven2/org/codehaus/plexus/plexus-utils/3.1.0/plexus-utils-3.1.0.pom
ownloaded from central: https://repo.maven.apache.org/maven2/org/codehaus/plexus/plexus-utils/3.1.0/plexus-utils-3.1.0.pom (4.7 kB at 3.9 kB/s)
ownloading from central: https://repo.maven.apache.org/maven2/org/codehaus/plexus/plexus-interpolation/1.24/plexus-interpolation-1.24.pom
ownloaded from central: https://repo.maven.apache.org/maven2/org/codehaus/plexus/plexus-interpolation/1.24/plexus-interpolation-1.24.pom (2.6 kB at 6.7 kB/s)
ownloading from central: https://repo.maven.apache.org/maven2/org/codehaus/plexus/plexus-utils/3.1.0/plexus-utils-3.1.0.jar
ownloading from central: https://repo.maven.apache.org/maven2/org/codehaus/plexus/plexus-interpolation/1.24/plexus-interpolation-1.24.jar
ownloaded from central: https://repo.maven.apache.org/maven2/org/codehaus/plexus/plexus-interpolation/1.24/plexus-interpolation-1.24.jar (79 kB at 27 kB/s)
ownloaded from central: https://repo.maven.apache.org/maven2/org/codehaus/plexus/plexus-utils/3.1.0/plexus-utils-3.1.0.jar (262 kB at 21 kB/s)
[INFO] Using 'UTF-8' encoding to copy filtered resources.
[INFO] skip non existing resourceDirectory /home/coding/tools/zookeeper/zookeeper-jutesrc/main/java/resources
[INFO]
[INFO] --- maven-compiler-plugin:3.8.1:compile (default-compile) @ zookeeper-jute ---
[INFO] Changes detected - recompiling the module!
[INFO] Compiling 106 source files to /home/coding/tools/zookeeper/zookeeper-jute/target/classes
[INFO] -----
[INFO] BUILD SUCCESS
[INFO] -----
[INFO] Total time: 12:17 min
[INFO] Finished at: 2024-07-07T11:38:31+08:00
[INFO] -----
root@VM-20-2-ubuntu:/home/coding/tools/zookeeper/zookeeper-jute#
```

现在从zookeeper-jute目录进入到zookeeper-client/zookeeper-client-c

```
cd ..../zookeeper-client/zookeeper-client-c
```

现在开始构建和安装zookeeper

```
autoreconf -if
./configure
make
make install
```

```
输出 调试控制台 端口
```

```
root@VM-20-2-ubuntu:/home/coding/tools/zookeeper/zookeeper-client/zookeeper-client-c# autoreconf -if
acinclude.m4:315: warning: macro 'AM_PATH_CPPUNIT' not found in library
configure.ac:38: error: Missing AM_PATH_CPPUNIT or PKG_CHECK_MODULES m4 macro.
acinclude.m4:317: CHECK_CPPUNIT is expanded from...
configure.ac:38: the top level
autom4te: error: /usr/bin/m4 failed with exit status: 1
aclocal: error: /usr/bin/autom4te failed with exit status: 1
autoreconf: error: aclocal failed with exit status: 1
root@VM-20-2-ubuntu:/home/coding/tools/zookeeper/zookeeper-client/zookeeper-client-c#
```

这里面执行autoreconf -if会出现一个小插曲，要用到cppunit.m4文件

我们可以拷贝到需要的地方，然后执行

回到我们的cppunit目录，找到cppunit.m4文件

```
root@VM-20-2-ubuntu:/home/coding/tools/zookeeper/cppunit# cp cppunit.m4 /usr/share/aclocal/
root@VM-20-2-ubuntu:/home/coding/tools/zookeeper/cppunit# cd ..//zookeeper-client/zookeeper-client-c/
root@VM-20-2-ubuntu:/home/coding/tools/zookeeper/zookeeper-client/zookeeper-client-c# ls
acinclude.m4  automate.cache  ChangeLog  CMakeLists.txt  generated  INSTALL  Makefile.am  pom.xml  src  tests
aminclude.am  c-doc.Doxymfile  cmake_config.h.in  configure.ac  include  LICENSE  NOTICE.txt  README  ssl
root@VM-20-2-ubuntu:/home/coding/tools/zookeeper/zookeeper-client/zookeeper-client-c# autoreconf -if
libtoolize: putting auxiliary files in '.'.
libtoolize: copying file './ltmain.sh'
libtoolize: Consider adding 'AC_CONFIG_MACRO_DIRS([m4])' to configure.ac,
libtoolize: and rerunning libtoolize and aclocal.
libtoolize: Consider adding '-I m4' to ACLOCAL_AMFLAGS in Makefile.am.
configure.ac:27: warning: The macro `AC_CONFIG_HEADER' is obsolete.
configure.ac:27: You should run autoupdate.
./lib/autoconf/status.m4:719: AC_CONFIG_HEADER is expanded from...
configure.ac:27: the top level
configure.ac:42: warning: The macro `AC_HELP_STRING' is obsolete.
configure.ac:42: You should run autoupdate.
./lib/autoconf/general.m4:204: AC_HELP_STRING is expanded from...
./lib/autoconf/general.m4:1553: AC_ARG_WITH is expanded from...
configure.ac:42: the top level
```

现在应该没问题了

下面是在sylar/build目录下执行make时遇到的一些问题

jsoncpp头文件路径错误

```
cd /home/coding/git_pros/sylar/sylar
rake1 /home/coding/git_pros/sylar/sylar/uri.rl -o /home/coding/git_pros/sylar/sylar/uri.rl.cc -l -C -G2 --error-format=msvc
[ 2%] Generating ..\sylar\http\http11_parser.rl.cc
cd /home/coding/git_pros/sylar/sylar/http
rake1 /home/coding/git_pros/sylar/http\http11_parser.rl -o /home/coding/git_pros/sylar/sylar/http\http11_parser.rl.cc -l -C -G2 --error-format=msvc
/home/coding/git_pros/sylar/http\http11_parser.rl(151,26): warning: exactly zero repetitions results in the null machine
/home/coding/git_pros/sylar/http\http11_parser.rl(151,26): warning: exactly zero repetitions results in the null machine
/home/coding/git_pros/sylar/http\http11_parser.rl(151,26): warning: exactly zero repetitions results in the null machine
[ 3%] Generating ..\sylar\http\httpclient_parser.rl.cc
cd /home/coding/git_pros/sylar/sylar/http
rake1 /home/coding/git_pros/sylar/sylar/http\httpclient_parser.rl -o /home/coding/git_pros/sylar/sylar/http\httpclient_parser.rl.cc -l -C -G2 --error-format=msvc
[ 4%] Generating ..\sylar\ns/ns_protobuf.pb.cc
proto --cpp_out=/home/coding/git_pros/sylar -I/home/coding/git_pros/sylar /home/coding/git_pros/sylar/sylar/ns/ns_protobuf.proto
[libprotobuf WARNING google/protobuf/compiler/parser.cc:648] No syntax specified for the proto file: sylar/ns/ns_protobuf.proto. Please use 'syntax = "proto2";' or 'syntax = "proto3";' to specify a syntax version. (Defaulted to proto2 syntax.)
cd /home/coding/git_pros/sylar/build & /usr/bin/cmake -E cmake_depends "Unix Makefiles" /home/coding/git_pros/sylar /home/coding/git_pros/sylar /home/coding/git_pros/sylar/build
/home/coding/git_pros/sylar/build /home/coding/git_pros/sylar/build/CMakeFiles/sylar.dir/DependInfo.cmake --color=
make[2]: Leaving directory '/home/coding/git_pros/sylar/build'
make  -f CMakeFiles/sylar.dir/build.make CMakeFiles/sylar.dir/build
make[2]: Entering directory '/home/coding/git_pros/sylar/build'
[ 5%] Building CXX object CMakeFiles/sylar.dir/sylar/address.cc.o
/usr/bin/c++ -DDEBUG_OFF -Dsylar_EXPORTS -D__FILE__=\\"sylar/address.cc\\" -I/home/coding/git_pros/sylar/. -I/usr/include/mysql -rdynamic -O3 -fPIC -ggdb -std=c++11 -Wall -Wno-deprecated -Werror -Wno-unused-function -Wno-built-in-macro-redefined -Wno-deprecated-declarations -fPIC -MD -MT CMakeFiles/sylar.dir/sylar/address.cc.o -MF CMakeFiles/sylar.dir/sylar/address.cc.o.d -o CMakeFiles/sylar.dir/sylar/address.cc.o -c /home/coding/git_pros/sylar/sylar/address.cc
In file included from /home/coding/git_pros/sylar/sylar/log.h:21,
                 from /home/coding/git_pros/sylar/sylar/address.cc:2:
/home/coding/git_pros/sylar/util.h:2:10: fatal error: json/json.h: No such file or directory
  2 | #include <json/json.h>
   | ~~~~~
compilation terminated.
make[2]: *** [CMakeFiles/sylar.dir/build.make:98: CMakeFiles/sylar.dir/sylar/address.cc.o] Error 1
make[2]: Leaving directory '/home/coding/git_pros/sylar/build'
make[1]: *** [CMakeFiles/Makefile2:120: CMakeFiles/sylar.dir/all] Error 2
make[1]: Leaving directory '/home/coding/git_pros/sylar/build'
make: *** [Makefile:94: all] Error 2
root@VM-20-2-ubuntu:/home/coding/git_pros/sylar/build#
```

```

2 #include <cxxabi.h>
3 #include <pthread.h>
4 #include <unistd.h>
5 #include <sys/types.h>
6 #include <sys/syscall.h>
7 #include <stdio.h>
8 #include <stdint.h>
9 #include <vector>
10 #include <string>
11 #include <iomanip>
12 #include <json/json.h>
13 #include <yaml-cpp/yaml.h>
14 #include <iostream>
15 #include <boost/lexical_cast.hpp>
16 #include <google/protobuf/message.h>
17 #include "sylar/util/hash_util.h"
18 #include "sylar/util/json_util.h"
19 #include "sylar/util/crypto_util.h"

0
1 namespace sylar {
2
3 /**
4  * @brief 返回当前线程的ID
5 */

```

这里我是jsoncpp头文件路径错误，改成jsoncpp/json/json.h就好了

string

这里是沒有包含头文件

```

ding@git_pros:sylar/build /home/coding/git_pros/sylar/build /home/coding/git_pros/sylar/build/CMakeFiles/sylar.dir/DependInfo.cmake --color=
Consolidate compiler generated dependencies of target sylar
make[2]: Leaving directory '/home/coding/git_pros/sylar/build'
make -f CMakeFiles/sylar.dir/build.make CMakeFiles/sylar.dir/build
make[2]: Entering directory '/home/coding/git_pros/sylar/build'
[ 1%] Building CXX object CMakefiles/sylar.dir/db/fox_thread.cc.o
/usr/bin/c++ -DDEBUG_OFF -Dsylar_EXPORTS -D__FILE__=\"sylar/db/fox_thread.cc\" -I/home/coding/git_pros/sylar/ -I/usr/include/mysql -rdynamic -O3 -fPIC -g
gdb -std=c++11 -Wall -Wno-deprecated -Werror -Wno-unused-function -Wno-builtin-macro-redefined -Wno-deprecated-declarations -fPIC -MD -MT CMakeFiles/sylar.dir/sylar/db/fox_thread.cc.o -MF CMakeFiles/sylar.dir/sylar/db/fox_thread.cc.o.d -o CMakeFiles/sylar.dir/sylar/db/fox_thread.cc.o -c /home/coding/git_pros/sylar/sylar/db/fox_thread.cc
In file included from /home/coding/git_pros/sylar/sylar/db/fox_thread.cc:1:
/home/coding/git_pros/sylar/sylar/db/fox_thread.h:88:17: error: field 'm_name' has incomplete type 'std::string' {aka 'std::__cxx11::basic_string<char>'}
  88 |     std::string m_name;
      |
In file included from /usr/include/c++/11/iosfwd:39,
                 from /usr/include/c++/11/bits/std_thread.h:39,
                 from /usr/include/c++/11/thread:43,
                 from /home/coding/git_pros/sylar/sylar/db/fox_thread.h:4,
                 from /home/coding/git_pros/sylar/sylar/db/fox_thread.cc:1:
/usr/include/c++/11/bits/stringfwd.h:74:11: note: declaration of 'std::string' {aka 'class std::__cxx11::basic_string<char>'}
   74 |     class basic_string;
      |
In file included from /home/coding/git_pros/sylar/sylar/db/fox_thread.cc:1:
/home/coding/git_pros/sylar/sylar/db/fox_thread.h:41:41: error: could not convert "" from 'const char [1]' to 'const string&' {aka 'const std::__cxx11::basic_string<char>&'}
   41 |     FoxThread(const std::string& name = "", struct event_base* base = NULL);
      |           ^
      |           |
      |           const char [1]
/home/coding/git_pros/sylar/sylar/db/fox_thread.h:131:17: error: field 'm_name' has incomplete type 'std::string' {aka 'std::__cxx11::basic_string<char>'}
}

```

my_bool

```

ros/sylar/sylar/db/fox_thread.cc
[ 2%] Building CXX object CMakeFiles/sylar.dir/sylar/db/mysql.cc.o
/usr/bin/c++ -DBUILDING -DSYLAR_EXPORTS -D__FILE__=\`sylar/db/mysql.cc\` -I/home/coding/git_pros/sylar/. -I/usr/include/mysql -rdynamic -O3 -fPIC -ggdb -std=c++11 -Wall -Wno-deprecated -Werror -Wno-unused-function -Wno-built-in-macro-redefined -Wno-deprecated-declarations -fPIC -MD -MT CMakeFiles/sylar.dir/sylar/db/mysql.cc.o -MF CMakeFiles/sylar.dir/sylar/db/mysql.cc.o.d -o CMakeFiles/sylar.dir/sylar/db/mysql.cc.o -c /home/coding/git_pros/sylar/sylar/db/mysql.cc
In file included from /home/coding/git_pros/sylar/sylar/db/mysql.cc:1:
/home/coding/git_pros/sylar/sylar/db/mysql.h:120:9: error: 'my_bool' does not name a type; did you mean 'bool'?
  120 |     my_bool is_null;
      |     ^~~~~~
      |     bool
/home/coding/git_pros/sylar/sylar/db/mysql.h:121:9: error: 'my_bool' does not name a type; did you mean 'bool'?
  121 |     my_bool error;
      |     ^~~~~~
      |     bool
/home/coding/git_pros/sylar/sylar/db/mysql.cc: In static member function 'static sylar::MySQLStmtRes::ptr sylar::MySQLStmtRes::Create(std::shared_ptr<sylar::MySQLStmt>)':
/home/coding/git_pros/sylar/sylar/db/mysql.cc:660:50: error: '__gnu_cxx::__alloc_traits<std::allocator<sylar::MySQLStmtRes::Data>, sylar::MySQLStmtRes::Data>::value_type' {aka 'struct sylar::MySQLStmtRes::Data'} has no member named 'is_null'
   660 |     rt->m_binds[i].is_null = &rt->m_datas[i].is_null;
      |     ^~~~~~
/home/coding/git_pros/sylar/sylar/db/mysql.cc:661:48: error: '__gnu_cxx::__alloc_traits<std::allocator<sylar::MySQLStmtRes::Data>, sylar::MySQLStmtRes::Data>::value_type' {aka 'struct sylar::MySQLStmtRes::Data'} has no member named 'error'
   661 |     rt->m_binds[i].error = &rt->m_datas[i].error;
      |     ^~~~~~
/home/coding/git_pros/sylar/sylar/db/mysql.cc: In member function 'virtual bool sylar::MySQLStmtRes::isNull(int)':
/home/coding/git_pros/sylar/sylar/db/mysql.cc:700:25: error: '__gnu_cxx::__alloc_traits<std::allocator<sylar::MySQLStmtRes::Data>, sylar::MySQLStmtRes::Data>::value_type' {aka 'struct sylar::MySQLStmtRes::Data'} has no member named 'is_null'
   700 |     return m_datas[idx].is_null;
      |     ^~~~~~

```

这是因为mysql-client C API版本问题，my_bool是在低版本的mysql开发库中的，现在下载的mysql-client中没有使用my_bool类型，所以可以直接替换成bool即可

未使用返回值错误

我们在cmakeLists.txt中设置了编译选项即可，添加-Wno-unused-result。

```
 6 #add_subdirectory(${CMAKE_CURRENT_SOURCE_DIR}/thirdpart/sqlite-3.28.0)
 7 #add_subdirectory(${CMAKE_CURRENT_SOURCE_DIR}/thirdpart/tinyxml2-7.0.1)
 8
 9 set(CMAKE_MODULE_PATH ${CMAKE_MODULE_PATH} ${CMAKE_CURRENT_SOURCE_DIR}/cmake)
10 include (cmake/utils.cmake)
11
12 set(CMAKE_VERBOSE_MAKEFILE ON)
13 set(CMAKE_CXX_FLAGS "${ENV{CXXFLAGS}} -rdynamic -O3 -fPIC -ggdb -std=c++11 -Wall
14 | -Wno-deprecated -Werror -Wno-unused-function -Wno-built-in-macro-redefined -Wno-deprecated-declarations -Wno-unused-result")
15 set(CMAKE_C_FLAGS "${ENV{CXXFLAGS}} -rdynamic -O3 -fPIC -ggdb -std=c11 -Wall
16 -Wno-deprecated -Werror -Wno-unused-function -Wno-built-in-macro-redefined -Wno-deprecated-declarations -Wno-unused-result")
17
```

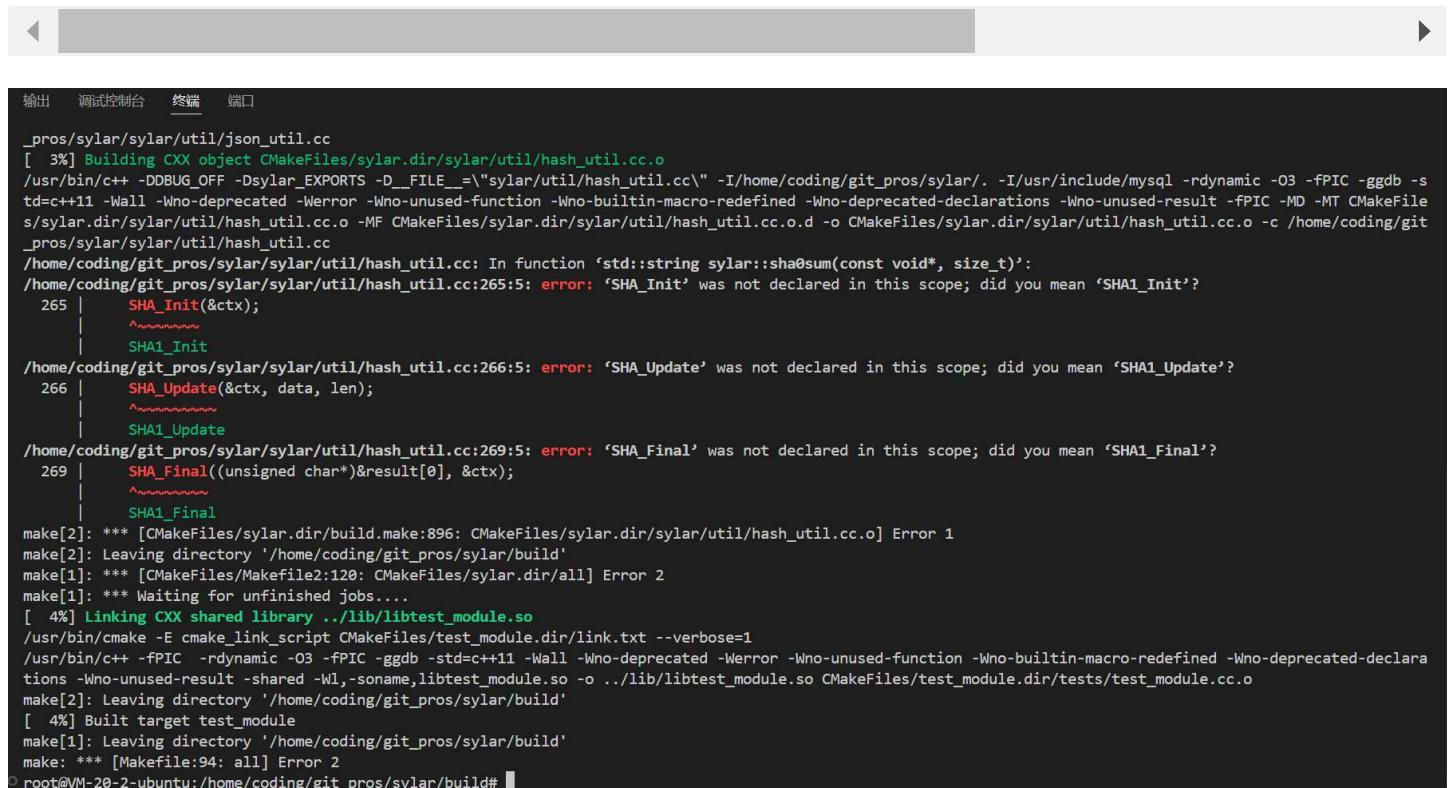
openssl库问题

```
_pros/sylar/sylar/util/hash_util.cc
/home/coding/git_pros/sylar/sylar/util/crypto_util.cc: In static member function ‘static int32_t sylar::CryptoUtil::Crypto(const EVP_CIPHER*, bool, const void*, const void*, const void*, int32_t, void*, int32_t*)’:
/home/coding/git_pros/sylar/sylar/util/crypto_util.cc:47:24: error: aggregate ‘EVP_CIPHER_CTX ctx’ has incomplete type and cannot be defined
 47 |     EVP_CIPHER_CTX ctx;
      |     ^~~
make[2]: *** [CMakeFiles/sylar.dir/build.make:868: CMakeFiles/sylar.dir/sylar/util/crypto_util.cc.o] Error 1
make[2]: *** Waiting for unfinished jobs...
make[2]: Leaving directory '/home/coding/git_pros/sylar/build'
make[1]: *** [CMakefiles/Makefile2:120: CMakeFiles/sylar.dir/all] Error 2
make[1]: Leaving directory '/home/coding/git_pros/sylar/build'
make: *** [Makefile:94: all] Error 2
root@VM-20-2-ubuntu:/home/coding/git_pros/sylar/build#
```

EVP_CIPHER_CTX ctx;

在 OpenSSL 的较新版本中，不建议直接使用栈分配的 EVP_CIPHER_CTX 结构体，而是使用 EVP_CIPHER_CTX_new 使用：

```
EVP_CIPHER_CTX *ctx = EVP_CIPHER_CTX_new()
EVP_CIPHER_CTX_free(ctx);
```



```
输出 调试控制台 终端 端口

_pros/sylar/sylar/util/json_util.cc
[ 3%] Building CXX object CMakeFiles/sylar.dir/sylar/util/json_util.cc.o
/usr/bin/c++ -DDEBUG_OFF -Dsylar_EXPORTS -D__FILE__=__"/sylar/util/json_util.cc__" -I/home/coding/git_pros/sylar/. -I/usr/include/mysql -rdynamic -O3 -fPIC -ggdb -s
td=c++11 -Wall -Wno-deprecated -Werror -Wno-unused-function -Wno-built-in-macro-redefined -Wno-deprecated-declarations -Wno-unused-result -fPIC -MD -MT CMakeFile
s/sylar.dir/sylar/util/json_util.cc.o -MF CMakeFiles/sylar.dir/sylar/util/json_util.cc.o.d -o CMakeFiles/sylar.dir/sylar/util/json_util.cc.o -c /home/coding/gi
_pros/sylar/sylar/util/json_util.cc
/home/coding/git_pros/sylar/sylar/util/json_util.cc: In function ‘std::string sylar::sha0sum(const void*, size_t)’:
/home/coding/git_pros/sylar/sylar/util/json_util.cc:265:5: error: ‘SHA_Init’ was not declared in this scope; did you mean ‘SHA1_Init’?
 265 |     SHA_Init(&ctx);
      |     ^~~~~~
      |     SHA1_Init
/home/coding/git_pros/sylar/sylar/util/json_util.cc:266:5: error: ‘SHA_Update’ was not declared in this scope; did you mean ‘SHA1_Update’?
 266 |     SHA_Update(&ctx, data, len);
      |     ^~~~~~
      |     SHA1_Update
/home/coding/git_pros/sylar/sylar/util/json_util.cc:269:5: error: ‘SHA_Final’ was not declared in this scope; did you mean ‘SHA1_Final’?
 269 |     SHA_Final((unsigned char*)bResult[0], &ctx);
      |     ^~~~~~
      |     SHA1_Final
make[2]: *** [CMakeFiles/sylar.dir/build.make:896: CMakeFiles/sylar.dir/sylar/util/json_util.cc.o] Error 1
make[2]: Leaving directory '/home/coding/git_pros/sylar/build'
make[1]: *** [CMakefiles/Makefile2:120: CMakeFiles/sylar.dir/all] Error 2
make[1]: *** Waiting for unfinished jobs...
[ 4%] Linking CXX shared library ..lib/libtest_module.so
/usr/bin/cmake -E cmake_link_script CMakeFiles/test_module.dir/link.txt --verbose=1
/usr/bin/c++ -fPIC -rdynamic -O3 -fPIC -ggdb -std=c++11 -Wall -Wno-deprecated -Werror -Wno-unused-function -Wno-built-in-macro-redefined -Wno-deprecated-declar
ations -Wno-unused-result -shared -WL,-soname,libtest_module.so -o ..lib/libtest_module.so CMakeFiles/test_module.dir/tests/test_module.cc.o
make[2]: Leaving directory '/home/coding/git_pros/sylar/build'
[ 4%] Built target test_module
make[1]: Leaving directory '/home/coding/git_pros/sylar/build'
make: *** [Makefile:94: all] Error 2
root@VM-20-2-ubuntu:/home/coding/git_pros/sylar/build#
```

这里直接替换成编译器提示的方法即可

zookeeper库问题

syalar > C zk_client.cc > {} syalar > [e] CONTAINER

```
3  namespace syalar {  
12 const int ZKClient::EventType::CREATED = ZOO_CREATED_EVENT;  
13 const int ZKClient::EventType::DELETED = ZOO_DELETED_EVENT;  
14 const int ZKClient::EventType::CHANGED = ZOO_CHANGED_EVENT;  
15 const int ZKClient::EventType::CHILD = ZOO_CHILD_EVENT;  
16 const int ZKClient::EventType::SESSION = ZOO_SESSION_EVENT;  
17 const int ZKClient::EventType::NOWATCHING = ZOO_NOTWATCHING_EVENT;  
18  
19 const int ZKClient::FlagsType::EPHEMERAL = ZOO_EPHEMERAL;  
20 const int ZKClient::FlagsType::SEQUENCE = ZOO_SEQUENCE;  
21 const int ZKClient::FlagsType::CONTAINER = ZOO_CONTAINER;  
22  
23 const int ZKClient::StateType::EXPIRED_SESSION = ZOO_EXPIRED_SESSION_STATE;  
24 const int ZKClient::StateType::AUTH_FAILED = extern "C" const int ZOO_CONNECTING_STATE  
25 const int ZKClient::StateType::CONNECTING = ZOO_CONNECTING_STATE;  
26 const int ZKClient::StateType::ASSOCIATING = ZOO_ASSOCIATING_STATE;
```

输出 调试控制台 终端 端口

```
_client.cc  
/home/coding/git_pros/syalar/syalar/zk_client.cc:21:44: error: 'ZOO_CONTAINER' was not declared in this scope; did you mean 'CONTAINER'?  
21 | const int ZKClient::FlagsType::CONTAINER = ZOO_CONTAINER;  
| |  
| |~~~~~  
| |CONTAINER  
/home/coding/git_pros/syalar/syalar/zk_client.cc:28:43: error: 'ZOO_READONLY_STATE' was not declared in this scope  
28 | const int ZKClient::StateType::READONLY = ZOO_READONLY_STATE;  
| |  
| |~~~~~  
/home/coding/git_pros/syalar/syalar/zk_client.cc:29:47: error: 'ZOO_NOTCONNECTED_STATE' was not declared in this scope; did you mean 'ZOO_CONNECTED_STATE'?  
29 | const int ZKClient::StateType::NOTCONNECTED = ZOO_NOTCONNECTED_STATE;  
| |  
| |~~~~~  
| |ZOO_CONNECTED_STATE  
/home/coding/git_pros/syalar/syalar/zk_client.cc: In member function 'bool syalar::ZKClient::reconnect()':  
/home/coding/git_pros/syalar/syalar/zk_client.cc:52:16: error: 'zookeeper_init2' was not declared in this scope; did you mean 'zookeeper_init'?  
52 |     m_handle = zookeeper_init2(m_hosts.c_str(), &ZKClient::OnWatcher, m_recvTimeout, nullptr, this, 0, m_logCb);  
| |  
| |~~~~~  
| |zookeeper_init  
/home/coding/git_pros/syalar/syalar/zk_client.cc: In member function 'bool syalar::ZKClient::init(const string&, int, syalar::ZKClient::watcher_callback, syalar::ZKC  
lient::log_callback)':  
/home/coding/git_pros/syalar/syalar/zk_client.cc:67:16: error: 'zookeeper_init2' was not declared in this scope; did you mean 'zookeeper_init'?  
67 |     m_handle = zookeeper_init2(hosts.c_str(), &ZKClient::OnWatcher, m_recvTimeout, nullptr, this, 0, lcb);  
| |  
| |~~~~~  
| |zookeeper_init  
/home/coding/git_pros/syalar/syalar/zk_client.cc: In member function 'int32_t syalar::ZKClient::setServers(const string&)':  
/home/coding/git_pros/syalar/syalar/zk_client.cc:72:15: error: 'zoo_set_servers' was not declared in this scope; did you mean 'setServers'?  
72 |     auto rt = zoo_set_servers(m_handle, hosts.c_str());  
| |  
| |~~~~~  
| |setServers  
/home/coding/git_pros/syalar/syalar/zk_client.cc: In member function 'int32_t syalar::ZKClient::getConfig(std::string&, bool, Stat*)':  
/home/coding/git_pros/syalar/syalar/zk_client.cc:103:16: error: 'ZOO_CONFIG_NODE' was not declared in this scope  
103 |     return get(ZOO_CONFIG_NODE, val, watch, stat);  
| |~~~~~
```

这情况是因为zookeeper的版本问题，可能你使用的是系统安装的低版本libzookeeper_mt-dev或者使用了自己编译安装的zookeeper，版本过低。

我们可以去github上下载zookeeper的源码，然后编译安装，版本号需要是3.7.0以上。

```

196     * used in the interest and event parameters of
197     * \ref zookeeper_interest and \ref zookeeper_process.
198     */
199 // @{
200 extern ZOOAPI const int ZOOKEEPER_WRITE;
201 extern ZOOAPI const int ZOOKEEPER_READ;
202 // @@
203
204 /**
205  * @name Create Mode
206 *
207  * These modes are used by zoo_create to affect node create.
208 */
209 // @@
210 extern ZOOAPI const int ZOO_PERSISTENT;
211 extern ZOOAPI const int ZOO_EPHEMERAL;
212 extern ZOOAPI const int ZOO_PERSISTENT_SEQUENTIAL;
213 extern ZOOAPI const int ZOO_EPHEMERAL_SEQUENTIAL;
214 extern ZOOAPI const int ZOO_CONTAINER;
215 extern ZOOAPI const int ZOO_PERSISTENT_WITH_TTL;
216 extern ZOOAPI const int ZOO_PERSISTENT_SEQUENTIAL_WITH_TTL;
217
218 /**
219  * \deprecated ZOO_SEQUENCE Create Flag has been deprecated. Use ZOO_PERSISTENT_SEQUENTIAL
220  * or ZOO_EPHEMERAL_SEQUENCE instead of it.
221 */
222 extern ZOOAPI const int ZOO_SEQUENCE;
223 // @@
224
225 /**
226  * @name State Consts
227  * These constants represent the states of a zookeeper connection. They are
228  * possible parameters of the watcher callback.
229 */
230 // @@
231 extern ZOOAPI const int ZOO_EXPIRED_SESSION_STATE;
232 extern ZOOAPI const int ZOO_AUTH_FAILED_STATE;
233 extern ZOOAPI const int ZOO_CONNECTING_STATE;
234 extern ZOOAPI const int ZOO_ASSOCIATING_STATE;
235 extern ZOOAPI const int ZOO_CONNECTED_STATE;
236 extern ZOOAPI const int ZOO_READONLY_STATE;

```

这里搜索一下我们需要的东西，github上这个zookeeper的版本是有的。可以选择编译安装使用。

或者去官网下载安装包安装。

```
wget https://archive.apache.org/dist/zookeeper-3.7.0/apache-zookeeper-3.7.0-bin.tar.gz
tar -zxvf apache-zookeeper-3.7.0-bin.tar.gz
```

查看是否有zookeeper库

```

root@VM-20-2-ubuntu:/home/coding/tools/zookeeper/zookeeper-client/zookeeper-client-c# ls /usr/local/lib | grep zookeeper
libzookeeper_mt.a
libzookeeper_mt.la
libzookeeper_mt.so
libzookeeper_mt.so.2
libzookeeper_mt.so.2.0.0
libzookeeper_st.a
libzookeeper_st.la
libzookeeper_st.so
libzookeeper_st.so.2
libzookeeper_st.so.2.0.0
root@VM-20-2-ubuntu:/home/coding/tools/zookeeper/zookeeper-client/zookeeper-client-c#

```

重新make

```

文件(F) 编辑(E) 选择(S) 查看(V) 转到(G) 运行(R) 终端(T) 帮助(H) ← →
          配制sylar环境
      文件管理器 ... M CMakeLists.txt C test_crypto.cc C crypto_util.cc C zk_client.cc C zookeeper.h C hash_util.cc C zk_client.h C fox_thread.h C thread.h C env.cc
      SYLAR [SSH: TENCENT] ... tests > C test_crypto.cc > C test_one()
      77 void test_one()
      105     std::cout << "origin: " << str << " - len=" << str.size() << std::endl;
      106     std::cout << "encode: " << sylar::base64encode(encode) << " - len=" << encode.size() << std::endl;
      107     std::cout << "decode: " << to_hex(encode) << " - len=" << encode.size() << std::endl;
      108     std::cout << "decode: " << decode << " - len=" << decode.size() << std::endl;
      109     std::cout << "====" << std::endl;
      110
      111 {
      112     EVP_CIPHER_CTX *ctx = EVP_CIPHER_CTX_new();
      113     EVP_CIPHER_CTX_init(ctx);
      114     EVP_EncryptInit(ctx, EVP_aes_256_cbc(), (const uint8_t *)key.c_str(), (const uint8_t *)iv.c_str());
      115
      116     ...
      117 }
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