

# openEuler riscv -OSC 安装和功能测试

(HYK-ISCAS 严禁复制)

## 准备工作

在安装好 openEuler 环境后，启动并登录，按照测试说明为 dnf 添加如下软件库：

[http://119.3.219.20:82/openEuler:/Mainline:/RISC-V/standard\\_riscv64/](http://119.3.219.20:82/openEuler:/Mainline:/RISC-V/standard_riscv64/)

添加可使用 `dnf config-manager --add-repo repository_url` 指令，在添加完成后执行 `dnf repolist all` 可以得到以下的输出：

```
Terminal Mar 25 14:16
root@53b79b139544: /

[root@openEuler-RISC-V-rare ~]# dnf config-manager --add-repo http://119.3.219.20:82/openEuler:/Mainline:/RISC-V/standard_riscv64/
Adding repo from: http://119.3.219.20:82/openEuler:/Mainline:/RISC-V/standard_riscv64/
[root@openEuler-RISC-V-rare ~]# dnf repolist all
repo id                                repo name                                status
119.3.219.20_82_openEuler_Mainline_RISC-V_standard_riscv64_ created by enabled
121.36.3.168_82_home_pandora_docker_standard_riscv64_ created by enabled
121.36.3.168_82_home_pandora_openEuler_stage1_ created by enabled
base                                   base                                   enabled
oe-noarch                             oe-noarch                             disabled
[root@openEuler-RISC-V-rare ~]#
```

之后按照测试说明安装相关软件包，安装之前使用 `date` 指令查看时间，如果时间不正确则使用 `date -s` 指令设置正确时间。在安装过程中，如果安装过程中出现问题 noarch 认证问题，则执行 `dnf config-manager --set-enabled oe-noarch` 之后重试，最终会显示如下结果：

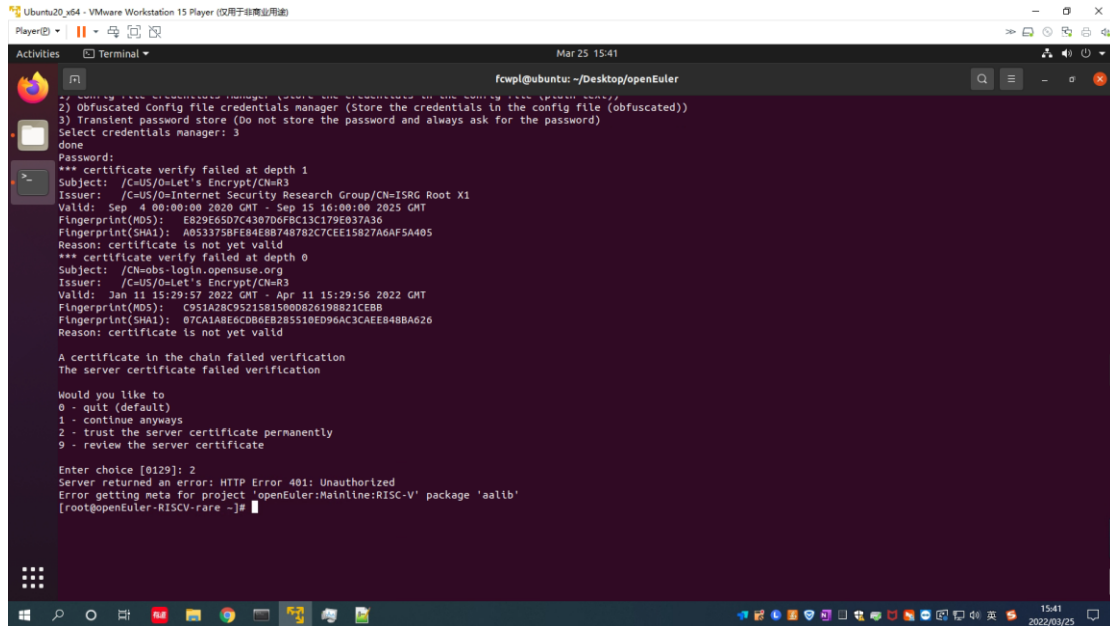
```
Ubuntu20_y64 - VMware Workstation 15 Player (仅用于非商业用途)
Player
Mar 25 15:11
fcwpl@ubuntu: ~/Desktop/openEuler

[SKIPPED] python3-lxml-4.6.2-2.oe1.riscv64.rpm: Already downloaded
[SKIPPED] python3-m2crypto-0.30.1-4.oe1.riscv64.rpm: Already downloaded
[SKIPPED] python3-pycurl-7.43.0-6-1.oe1.riscv64.rpm: Already downloaded
[SKIPPED] python3-urllibgrabber-4.0.0-4.oe1.noarch.rpm: Already downloaded
(6/8): python3-setuptools-40.4.3-4.oe1.noarch.r 73 kB/s | 481 kB 00:06
-----
Total                                         73 kB/s | 481 kB 00:06
Running transaction check
Transaction check succeeded.
Running transaction test
Transaction test succeeded.
Running transaction
Preparing : python3-setuptools-40.4.3-4.oe1.noarch 1/1
Installing : python3-chardet-3.0.4-9.oe1.noarch 1/8
Installing : python3-pycurl-7.43.0-6-1.oe1.riscv64 2/8
Installing : python3-urllibgrabber-4.0.0-4.oe1.noarch 3/8
Installing : python3-m2crypto-0.30.1-4.oe1.riscv64 4/8
Installing : libxslt-1.1.34-4.oe1.riscv64 5/8
Running scriptlet: libxslt-1.1.34-4.oe1.riscv64 6/8
Installing : python3-lxml-4.6.2-2.oe1.riscv64 7/8
Installing : osc-0.109.1-3.oe1.noarch 8/8
Running scriptlet: osc-0.109.1-3.oe1.noarch 8/8
Verifying : libxslt-1.1.34-4.oe1.riscv64 1/8
Verifying : osc-0.109.1-3.oe1.noarch 2/8
Verifying : python3-chardet-3.0.4-9.oe1.noarch 3/8
Verifying : python3-lxml-4.6.2-2.oe1.riscv64 4/8
Verifying : python3-m2crypto-0.30.1-4.oe1.riscv64 5/8
Verifying : python3-pycurl-7.43.0-6-1.oe1.riscv64 6/8
Verifying : python3-urllibgrabber-4.0.0-4.oe1.noarch 7/8
Verifying : python3-setuptools-40.4.3-4.oe1.noarch 8/8

Installed:
osc-0.109.1-3.oe1.noarch libxslt-1.1.34-4.oe1.riscv64
python3-chardet-3.0.4-9.oe1.noarch python3-lxml-4.6.2-2.oe1.riscv64
python3-m2crypto-0.30.1-4.oe1.riscv64 python3-pycurl-7.43.0-6-1.oe1.riscv64
python3-urllibgrabber-4.0.0-4.oe1.noarch python3-setuptools-40.4.3-4.oe1.noarch

Complete!
[root@openEuler-RISC-V-rare ~]#
```

之后按照说明中的步骤，执行 `osc co openEuler:Mainline:RISC-V/aalib`，输入用户名和密码，在选择密码是否存储等问题之后会得到如下图中的输出：



可以看到提示了未认证，最后程序退出了，这时需要到`~/config/osc`下，将`osrcr`文件中的`apiurl`改为`https://build.openeuler.org/`，去掉`no_verify = 1`的注释，并将`[https://api.opensuse.org]`改为`[https://build.openeuler.org]`，注释中的可以不管，最终的文件内容如下：

```
[root@openEuler-RISC-V-rare osc]# cat osrcr
[general]
# URL to access API server, e.g. https://api.opensuse.org
# you also need a section [https://api.opensuse.org] with the credentials
apiurl = https://build.openeuler.org
# Downloaded packages are cached here. Must be writable by you.
#packagecachedir = /var/tmp/osbuild-packagecache
# Wrapper to call build as root (sudo, su -, ...)
#su-wrapper = sudo
# rootdir to setup the chroot environment
# can contain %(repo)s, %(arch)s, %(project)s, %(package)s and %(apihost)s (apihost is the
hostname
# extracted from currently used apiurl) for replacement, e.g.
# /srv/oscbuild/%(repo)s-%(arch)s or
# /srv/oscbuild/%(repo)s-%(arch)s-%(project)s-%(package)s
#build-root = /var/tmp/build-root/%(repo)s-%(arch)s
# compile with N jobs (default: "getconf _NPROCESSORS_ONLN")
#build-jobs = N
# build-type to use - values can be (depending on the capabilities of the 'build' script)
# empty      - chroot build
# kvm        - kvm VM build   (needs build-device, build-swap, build-memory)
# xen        - xen VM build   (needs build-device, build-swap, build-memory)
# experimental:
#   qemu     - qemu VM build
```

---

```
# lxc - lxc build
#build-type =
# build-device is the disk-image file to use as root for VM builds
# e.g. /var/tmp/FILE.root
#build-device = /var/tmp/FILE.root
# build-swap is the disk-image to use as swap for VM builds
# e.g. /var/tmp/FILE.swap
#build-swap = /var/tmp/FILE.swap
# build-kernel is the boot kernel used for VM builds
#build-kernel = /boot/vmlinuz
# build-initrd is the boot initrd used for VM builds
#build-initrd = /boot/initrd
# build-memory is the amount of memory used in the VM
# value in MB - e.g. 512
#build-memory = 512
# build-vmdisk-rootsize is the size of the disk-image used as root in a VM build
# values in MB - e.g. 4096
#build-vmdisk-rootsize = 4096
# build-vmdisk-swapspace is the size of the disk-image used as swap in a VM build
# values in MB - e.g. 1024
#build-vmdisk-swapspace = 1024
# build-vmdisk-filesystem is the file system type of the disk-image used in a VM build
# values are ext3(default) ext4 xfs reiserfs btrfs
#build-vmdisk-filesystem = ext4
# Numeric uid:gid to assign to the "abuild" user in the build-root
# or "caller" to use the current users uid:gid
# This is convenient when sharing the buildroot with ordinary usersids
# on the host.
# This should not be 0
# build-uid =
# strip leading build time information from the build log
# buildlog_strip_time = 1
# Enable ccache in build roots.
# ccache = 1
# extra packages to install when building packages locally (osc build)
# this corresponds to osc build's -x option and can be overridden with that
# -x " can also be given on the command line to override this setting, or
# you can have an empty setting here. This global setting may leads to
# dependency problems when the base distro is not providing the package.
# => using server side definition via cli_debug_packages substitute rule is
# recommended therefore.
#extra-pkgs =
# build platform is used if the platform argument is omitted to osc build
#build_repository = openSUSE_Factory
```

---

```
# default project for getpac or bco
#getpac_default_project = openSUSE:Factory
# alternate filesystem layout: have multiple subdirs, where colons were.
#checkout_no_colon = 0
# change filesystem layout: avoid checkout within a project or package dir.
#checkout_rooted = 0
# local files to ignore with status, addremove, ...
#exclude_glob = .osc CVS .svn .* _linkerror *~ ## *.orig *.bak *.changes.vctmp.*
# limit the age of requests shown with 'osc req list'.
# this is a default only, can be overridden by 'osc req list -D NNN'
# Use 0 for unlimited.
#request_list_days = 0
# show info useful for debugging
#debug = 1
# show HTTP traffic useful for debugging
#http_debug = 1
# number of retries on HTTP transfer
#http_retries = 3
# Skip signature verification of packages used for build.
no_verify = 1
# jump into the debugger in case of errors
#post_mortem = 1
# print call traces in case of errors
#traceback = 1
# check for unversioned/removed files before commit
#check_filelist = 1
# check for pending requests after executing an action (e.g. checkout, update, commit)
#check_for_request_on_action = 1
# what to do with the source package if the submitrequest has been accepted. If
# nothing is specified the API default is used
#submitrequest_on_accept_action = cleanup|update|noupdate
# template for an accepted submitrequest
#submitrequest_accepted_template = Hi %(who)s,\n
# thanks for working on:\t%(tgt_project)s/%(tgt_package)s.
# SR %(reqid)s has been accepted.\n\nYour maintainers
# template for a declined submitrequest
#submitrequest_declined_template = Hi %(who)s,\n
# sorry your SR %(reqid)s (request type: %(type)s) for
# %(tgt_project)s/%(tgt_package)s has been declined because...
#review requests interactively (default: off)
#request_show_review = 1
# if a review is accepted in interactive mode and a group
# was specified the review will be accepted for this group (default: off)
#review_inherit_group = 1
```

[https://build.openeuler.org]

# set aliases for this apiurl

# aliases = foo, bar

# real name used in .changes, unless the one from osc meta prj <user> will be used

# realname =

# email used in .changes, unless the one from osc meta prj <user> will be used

# email =

# additional headers to pass to a request, e.g. for special authentication

#http\_headers = Host: foofoobar,

# User: mumblegack

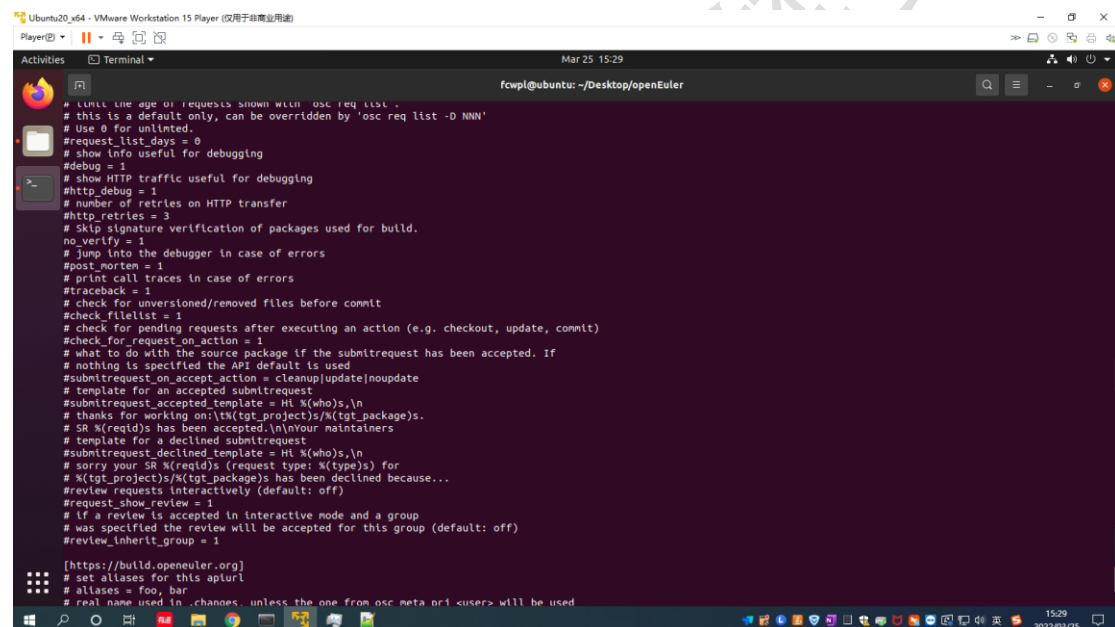
# Plain text password

#pass =

user=HuangYuekai

credentials\_mgr\_class=osc.credentials.TransientCredentialsManager

[root@openEuler-RISCV-rare osc]#

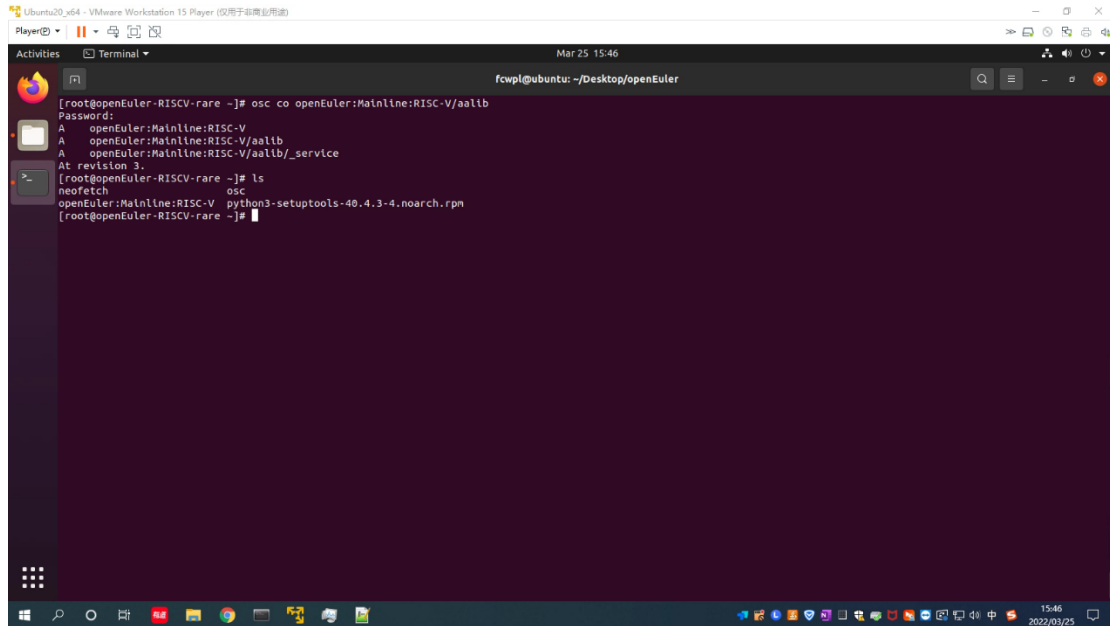


至此，准备阶段的工作就完成了。

## 测试阶段

### 1.再次运行 osc co openEuler:Mainline:RISC-V/aalib

调整完成后，再次运行 osc co openEuler:Mainline:RISC-V/aalib 指令，得到如下的输出，如果之前没有选择 2 则这里会提示再选择，选择 2 最终执行成功



如果之前没有选择 2，则这里的输出如下：

```
[root@openEuler-RISC-V-rare osc]# osc co openEuler:Mainline:RISC-V/aalib
```

Password:

\*\*\* certificate verify failed at depth 1

Subject: /C=US/O=Let's Encrypt/CN=R3

Issuer: /C=US/O=Internet Security Research Group/CN=ISRG Root X1

Valid: Sep 4 00:00:00 2020 GMT - Sep 15 16:00:00 2025 GMT

Fingerprint(MD5): E829E65D7C4307D6FBC13C179E037A36

Fingerprint(SHA1): A053375BFE84E8B748782C7CEE15827A6AF5A405

Reason: certificate is not yet valid

\*\*\* certificate verify failed at depth 0

Subject: /CN=build.openeuler.org

Issuer: /C=US/O=Let's Encrypt/CN=R3

Valid: Feb 25 02:41:36 2022 GMT - May 26 02:41:35 2022 GMT

Fingerprint(MD5): F8EEDA0BB1AA2705BF4F5ECC129AD48D

Fingerprint(SHA1): A684E5C35A32FE93B6D93DF65DEDC976ADD2954E

Reason: certificate is not yet valid

A certificate in the chain failed verification

The server certificate failed verification

Would you like to

0 - quit (default)

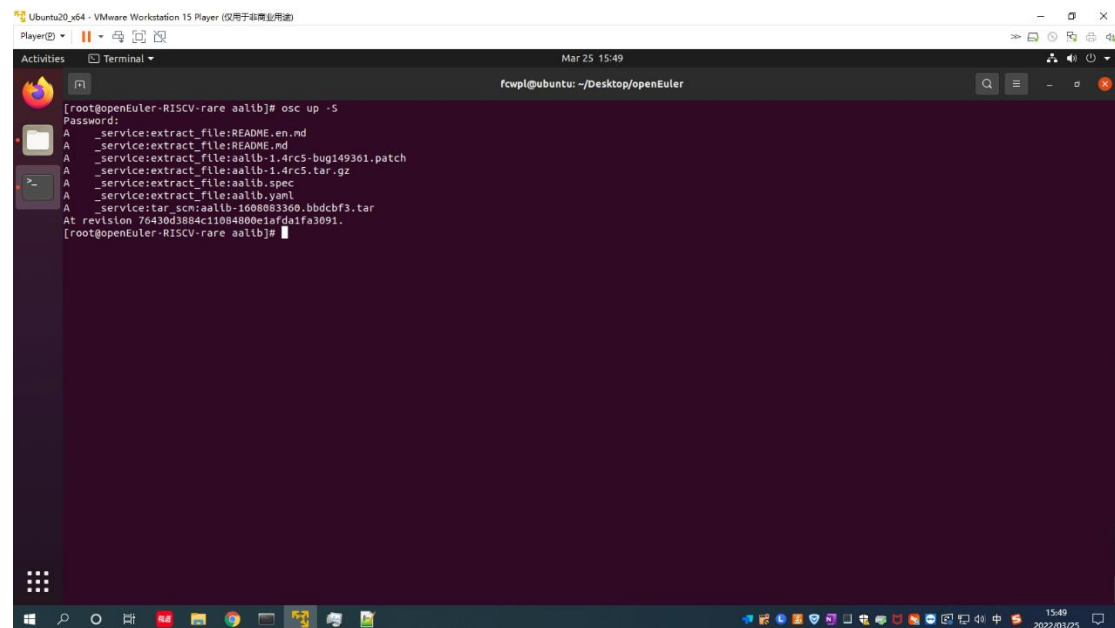
1 - continue anyways

2 - trust the server certificate permanently

9 - review the server certificate

Enter choice [0129]: 2  
A openEuler:Mainline:RISC-V  
A openEuler:Mainline:RISC-V/aalib  
A openEuler:Mainline:RISC-V/aalib/\_service  
At revision 3.  
[root@openEuler-RISC-V-rare osc]#

**2.进入 openEuler:Mainline:RISC-V/aalib 文件夹，运行 osc up -S 命令**  
按照说明执行代码，可以得到如下的输出：



```
[root@openEuler-RISC-V-rare aalib]# osc up -S
Password:
A _service:extract_file:README.en.md
A _service:extract_file:README.md
A _service:extract_file:aalib-1.4rc5-bug149361.patch
A _service:extract_file:aalib-1.4rc5.tar.gz
A _service:extract_file:aalib.spec
A _service:extract_file:aalib.yaml
A _service:tar_scm:aalib-1608083360.bbdcbf3.tar
A
At revision 76430d3884c11084800e1afda1fa3091.
[root@openEuler-RISC-V-rare aalib]#
```

表明成功执行并下载相应软件包。

**3.构建 aalib 包，记录最后几行构建成功的信息**

按照测试说明，继续执行 `rm -f _service;for file in `ls | grep -v .osc`;do new_file=${file##*.};mv $file $new_file;done`，然后运行 `osc build`，得到如下的输出：

```
[ 904s] Wrote: /home/abuild/rpmbuild/RPMS/riscv64/aalib-1.4.0-2.oe1.riscv64.rpm
[ 904s] Wrote: /home/abuild/rpmbuild/RPMS/riscv64/aalib-debugsource-1.4.0-2.oe1.riscv64.rpm
[ 904s] Wrote: /home/abuild/rpmbuild/RPMS/riscv64/aalib-debuginfo-1.4.0-2.oe1.riscv64.rpm
[ 904s] Executing(%clean): /bin/sh -e /var/tmp/rpm-tmp.f55QWY
[ 904s] + umask 022
[ 904s] + cd /home/abuild/rpmbuild/BUILD
[ 904s] + cd aalib-1.4.0
[ 904s] + /usr/bin/rm -rf /home/abuild/rpmbuild/BUILDROOT/aalib-1.4.0-2.oe1.riscv64
[ 904s] + RPM_EC=0
[ 904s] ++ jobs -p
[ 904s] + exit 0
[ 907s] ... checking for files with abuild user/group
[ 907s] openEuler-RISCv-rare finished "build aalib.spec" at Tue Sep 3 10:56:38 UTC 2019.
[ 907s]

/var/tmp/build-root/advanced_riscv64-riscv64/home/abuild/rpmbuild/SRPMS/aalib-1.4.0-2.oe1.src.rpm
/var/tmp/build-root/advanced_riscv64-riscv64/home/abuild/rpmbuild/RPMS/riscv64/aalib-1.4.0-2.oe1.riscv64.rpm
/var/tmp/build-root/advanced_riscv64-riscv64/home/abuild/rpmbuild/RPMS/riscv64/aalib-help-1.4.0-2.oe1.riscv64.rpm
/var/tmp/build-root/advanced_riscv64-riscv64/home/abuild/rpmbuild/RPMS/riscv64/aalib-debugsource-1.4.0-2.oe1.riscv64.rpm
/var/tmp/build-root/advanced_riscv64-riscv64/home/abuild/rpmbuild/RPMS/riscv64/aalib-debuginfo-1.4.0-2.oe1.riscv64.rpm
/var/tmp/build-root/advanced_riscv64-riscv64/home/abuild/rpmbuild/RPMS/riscv64/aalib-devel-1.4.0-2.oe1.riscv64.rpm
[root@openEuler-RISCv-rare aalib]#
```

可以看到，输出结果提升 **finished "build aalib.spec"**，至此，测试阶段全部完成。