

Summary

This document introduces how to perform LSB test on target.

Definitions

PC\$: The prompt of the host PC-Linux with normal user privilege

PC#: The prompt of the host PC-Linux with root user privilege

TGT#: The prompt of the target system with root user privilege

Step 1: Get the LSB test suite

You can get the LSB test suite from the following link:

<http://ftp.linuxfoundation.org/pub/lsb/>

The latest version is 4.1.0.

We will perform LSB on ia32, x86_64 and ppc32 architecture. So we need to download these files:

[http://ftp.linuxfoundation.org/pub/lsb/bundles/released-4.1.0/dist-testkit/lsb-dist-testkit-4.1.0-5.\\${ARCH}.tar.gz](http://ftp.linuxfoundation.org/pub/lsb/bundles/released-4.1.0/dist-testkit/lsb-dist-testkit-4.1.0-5.${ARCH}.tar.gz)

[http://ftp.linux-foundation.org/pub/lsb/lsbdev/released-4.1.0/binary/\\${ARCH}/lsb-xdg-utils-4.0.0-2.\\${ARCH}.rpm](http://ftp.linux-foundation.org/pub/lsb/lsbdev/released-4.1.0/binary/${ARCH}/lsb-xdg-utils-4.0.0-2.${ARCH}.rpm)

[http://ftp.linux-foundation.org/pub/lsb/app-battery/released-4.1.0/\\${ARCH}/lsb-apache-2.2.14-3.lsb4.\\${ARCH}.rpm](http://ftp.linux-foundation.org/pub/lsb/app-battery/released-4.1.0/${ARCH}/lsb-apache-2.2.14-3.lsb4.${ARCH}.rpm)

[http://ftp.linux-foundation.org/pub/lsb/app-battery/released-4.1.0/\\${ARCH}/lsb-tcl-8.5.7-6.lsb4.\\${ARCH}.rpm](http://ftp.linux-foundation.org/pub/lsb/app-battery/released-4.1.0/${ARCH}/lsb-tcl-8.5.7-6.lsb4.${ARCH}.rpm)

[http://ftp.linux-foundation.org/pub/lsb/app-battery/released-4.1.0/\\${ARCH}/lsb-expect-5.43.0-11.lsb4.\\${ARCH}.rpm](http://ftp.linux-foundation.org/pub/lsb/app-battery/released-4.1.0/${ARCH}/lsb-expect-5.43.0-11.lsb4.${ARCH}.rpm)

[http://ftp.linux-foundation.org/pub/lsb/app-battery/released-4.1.0/\\${ARCH}/lsb-groff-1.20.1-5.lsb4.\\${ARCH}.rpm](http://ftp.linux-foundation.org/pub/lsb/app-battery/released-4.1.0/${ARCH}/lsb-groff-1.20.1-5.lsb4.${ARCH}.rpm)

[http://ftp.linux-foundation.org/pub/lsb/app-battery/released-4.1.0/\\${ARCH}/lsb-raptor-1.4.19-3.lsb4.\\${ARCH}.rpm](http://ftp.linux-foundation.org/pub/lsb/app-battery/released-4.1.0/${ARCH}/lsb-raptor-1.4.19-3.lsb4.${ARCH}.rpm)

[http://ftp.linux-foundation.org/pub/lsb/app-battery/released-4.1.0/\\${ARCH}/lsb-xpdf-1.01-10.lsb4.\\${ARCH}.rpm](http://ftp.linux-foundation.org/pub/lsb/app-battery/released-4.1.0/${ARCH}/lsb-xpdf-1.01-10.lsb4.${ARCH}.rpm)

[http://ftp.linux-foundation.org/pub/lsb/app-battery/released-4.1.0/\\${ARCH}/lsb-samba-3.4.3-5.lsb4.\\${ARCH}.rpm](http://ftp.linux-foundation.org/pub/lsb/app-battery/released-4.1.0/${ARCH}/lsb-samba-3.4.3-5.lsb4.${ARCH}.rpm)

[http://ftp.linux-foundation.org/pub/lsb/app-battery/released-4.1.0/\\${ARCH}/lsb-rsync-3.0.6-3.lsb4.\\${ARCH}.rpm](http://ftp.linux-foundation.org/pub/lsb/app-battery/released-4.1.0/${ARCH}/lsb-rsync-3.0.6-3.lsb4.${ARCH}.rpm)

If your target machine can not access Internet, you also need to download these files:

<http://ftp.linuxfoundation.org/pub/lsb/snapshots/appbat/tests/expect-tests.tar>

<http://ftp.linuxfoundation.org/pub/lsb/snapshots/appbat/tests/tcl-tests.tar>

<http://ftp.linuxfoundation.org/pub/lsb/snapshots/appbat/tests/raptor-tests.tar>

<http://ftp.linuxfoundation.org/pub/lsb/snapshots/appbat/tests/test1.pdf>

<http://ftp.linuxfoundation.org/pub/lsb/snapshots/appbat/tests/test2.pdf>

If your target machine can access Internet, you don't need to do this. It can be

downloaded from Internet automatically during LSB installation.

Step 2: Get the poky-image-lsb-sdk-rootfs

Download the poky-image-lsb-sdk-rootfs tarball, modules tarball and kernel image from autobuilder: <http://autobuilder.yoctoproject.org>

Step 3: Create a qemu image

With qemu, since running LSB need lots of disk space, so we need to create a 8GB lsb-sdk image. If you are running LSB on a real hardware, just skip this step.

```
PC$ dd if=/dev/zero of=poky-image-lsb-sdk-${ARCH}.ext3 bs=1M count=8000
```

```
PC$ sudo mkfs.ext3 poky-image-lsb-sdk-${ARCH}.ext3
```

```
PC$ mkdir lsb-mnt
```

```
PC$ sudo mount -o loop poky-image-lsb-sdk-${ARCH}.ext3 lsb-mnt
```

```
PC$ cd lsb-mnt
```

```
PC$ sudo tar pxjvf ../poky-image-lsb-sdk-${ARCH}.rootfs.tar.bz2
```

Running LSB need loop.ko module, you must install modules tarball.

```
PC$ sudo tar pxzvf ../modules-${KERNEL_VERSION}.tgz
```

```
PC$ cd .. ; sudo umount lsb-mnt
```

And we also need to increase the qemu memory to 512MB.

For example, increase memory with qemu86:

```
PC$ sudo vim /opt/poky/1.0/sysroots/x86_64-pokysdk-linux/usr/bin/poky-qemu-internal
```

```
#####
```

```
if [ -z "$QEMU_MEMORY" ]; then
```

```
    case "$MACHINE" in
```

```
        "qemux86")
```

```
            QEMU_MEMORY="128M"
```

```
#####
```

Change "128M" to "512M"

```
#####
```

```
if [ -z "$QEMU_MEMORY" ]; then
```

```
    case "$MACHINE" in
```

```
        "qemux86")
```

```
            QEMU_MEMORY="512M"
```

```
#####
```

Add "-m \$QEMUMEMORY" to the proper line.

```
#####
```

```
if [ "$MACHINE" = "qemux86" ]; then
```

```
    QEMU=qemu
```

```
    QEMU_UI_OPTIONS="$QEMU_UI_OPTIONS -vga vmware -enable-gl"
```

```

if [ "$FSTYPE" = "ext3" ]; then
    KERNCMDLINE="vga=0          root=/dev/hda          mem=$QEMU_MEMORY
$KERNEL_NETWORK_CMD"
    QEMUOPTIONS="$QEMU_NETWORK_CMD -hda $ROOTFS $QEMU_UI_OPTIONS"
#####

#####
if [ "$MACHINE" = "qemux86" ]; then
    QEMU=qemu
    QEMU_UI_OPTIONS="$QEMU_UI_OPTIONS -vga vmware -enable-gl"
    if [ "$FSTYPE" = "ext3" ]; then
        KERNCMDLINE="vga=0          root=/dev/hda          mem=$QEMU_MEMORY
$KERNEL_NETWORK_CMD"
        QEMUOPTIONS="$QEMU_NETWORK_CMD -m $QEMU_MEMORY -hda $ROOTFS
$QEMU_UI_OPTIONS"
#####

```

Step 4: Set environment and install LSB on target

Boot up the target.

Copy LSB test suite installation files to the target.

```
TGT# tar xzvf lsb-dist-testkit-${ARCH}.tar.gz -C /
```

Put other files to the lsb-Application directory.

```
TGT# mkdir /lsb-Application
```

```
TGT# mv *.rpm *.tar *.pdf /lsb-Application/
```

With real hardware, you also need to copy modules tarball to the target. And run the following commands:

```
TGT# tar pxzvf modules-${KERNEL_VERSION}.tgz -C /
```

Both on qemu and hardware, you need to run the following command in order to generate the new modules.dep and map files

```
TGT# depmod -a
```

Make sure the system time is correct on your target, using 'date MMDDhhmmYYYY' to set it.

Then run the following commands to set environment and install LSB:

```
TGT# sh /usr/bin/LSB_Setup.sh
```

Note: There are 3 bugs in LSB_Setup.sh script now (this will be modified in future), so please run the following command before running this script.

```
1. TGT# modprobe loop
```

```
2. TGT# echo "${ARCH}-suse" >> /etc/rpm/platform
```

```
TGT# echo "${ARCH}-noarch" >> /etc/rpm/platform
```

```
TGT# echo "${ARCH}-pc" >> /etc/rpm/platform
```

```
TGT# echo "noarch-suse" >> /etc/rpm/platform
${ARCH} is your target architecture.
For x86: i486
For x86_64: x86_64
For ppc: ppc
3. When LSB installation finish, you need install lsb-apache manually:
    TGT# rpm -ivh lsb-apache-2.2.14-3.lsb4.${ARCH}.rpm --noscripts --nodeps
--force
```

```
#####
```

This system appears to be a RPM-based distribution, such as those from Red Hat, SuSE/Novell, Mandriva, Asianux, etc.

Is this correct? y

```
.....
```

The port '8888' will be used by the Distribution Checker's web-UI server.

The command 'sudo su -c' will be used to gain root access.

If you want to change this, run /opt/lsb/test/manager/bin/dist-checker-start.pl
<port> <sudo-command>

```
.....
```

```
#####
```

You just need to run the above script at first time. When the LSB has been installed, if you want to start it, just run the following command:

(remember insert module loop.ko first!)

```
TGT# /opt/lsb/test/manager/bin/dist-checker-start.pl
```

And if you want to stop the LSB server, just run the following command:

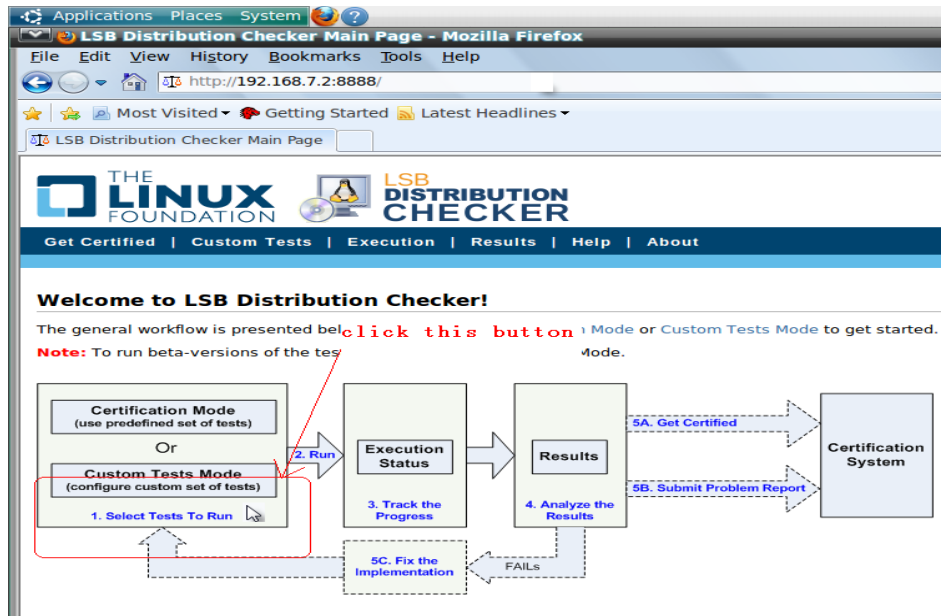
```
TGT# /opt/lsb/test/manager/bin/dist-checker-stop.pl
```

Step 5: Run LSB test suite

1. Open a web browser on host. Input the target IP address and port. For example:

http://192.168.7.2:8888

2. Select tests mode



3. Click button “Refresh List”

4. Select test item. Now we can select the following tests:

Command Tests

Static Interface Tests

Runtime Interface Tests

Automated Application Battery Tests

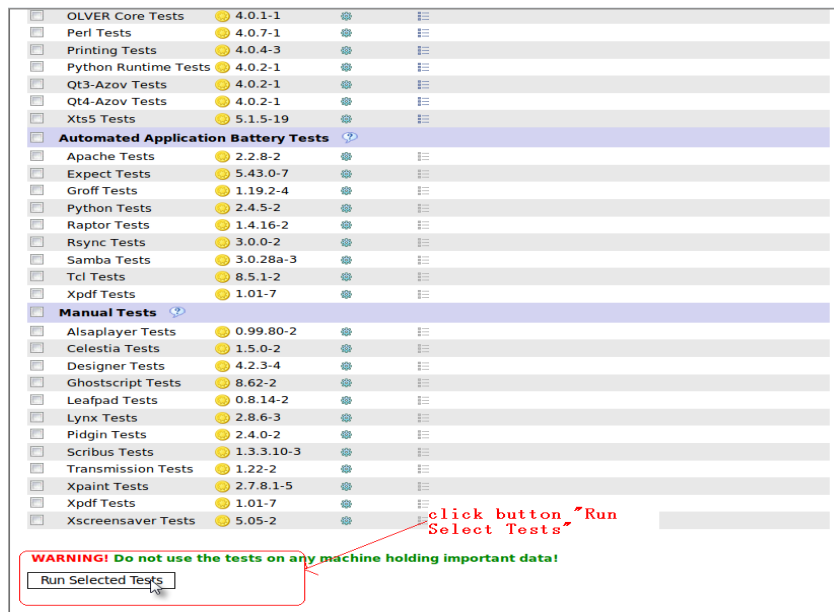
Note: Make sure the “Status” must be marked as “Locally installed” in every test item.

select test item

click “down trigular” and select Locally installed

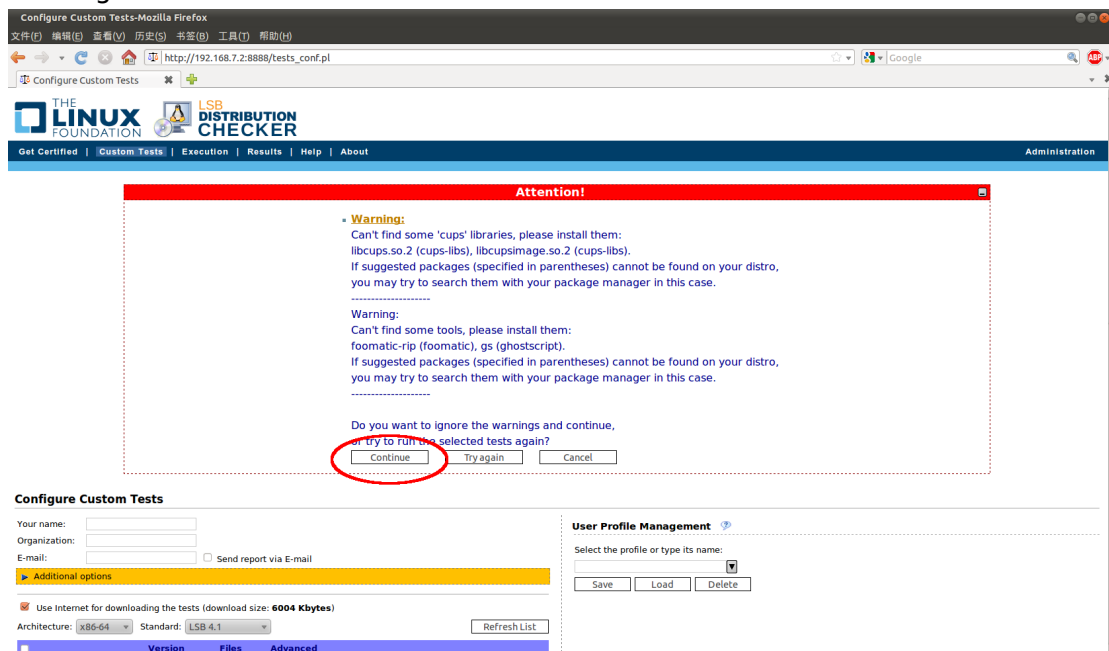
Status	Version	Downloaded
Certifying	4.0.0-2	0% 19 Kb left
Locally installed	4.0.0-2	100% 0 Kb left

5. Run test item



If you encounter an error message with some test items, just disselect these items and run test again.

If you encounter a warning message with some test items, you can ignore these message and click 'Continue' button.



Note: Running the entire LSB test will take a long time, maybe more than 2 days, please be patient.

6. Get the result

When the LSB test finished, you can get the result. You can download the test

journals to the location and send it to the developer.

The screenshot shows the 'Test Results-Mozilla Firefox' window. The browser address bar displays the URL: http://192.168.7.2:8888/tests_results.pl?details=x86-64-qemux86-64-2011-04-02-09h-23m-17s&summary=1. The page header includes the Linux Foundation and LSB Distribution Checker logos, along with navigation links: 'Get Certified', 'Custom Tests', 'Execution', 'Results', 'Help', 'About', and 'Administration'.

Summary Report for Test Run of 02.04.2011 09:23:17

Test Execution Status

Automatic Tests	FAILED	View detailed report
Manual Tests	NOT SELECTED	

Analyze the Failing Tests

Please analyze the **detailed report** to understand the reasons of each fail and classify them into the following groups:

- Confirmed FAILS**, which are due to the real inconsistencies of your system with the standard. To continue with the certification, you have to fix your implementation to remedy such FAILS and then rerun the tests again.
- False FAILS**, which you believe are due to the incorrect tests. Please report such FAILS to the lf_jsbcert@lists.linuxfoundation.org list. If the problem reported is confirmed you will be granted a waiver so the test failure will not affect your ability to certify.
- Unknown FAILS**, which you have no idea about. Please ask help at the lf_jsbcert@lists.linuxfoundation.org list.

Note: only test results with all the FAILS waived are eligible for certification.

Locating Test Journals

You can **download** commented test journals of this test run at the following path (click to download to another location): <http://var/opt/lsb/test/manager/results/x86-64-qemux86-64-2011-04-02-09h-23m-17s/x86-64-qemux86-64-2011-04-02-09h-23m-17s.tgz>. You need to attach them when applying for certification or when communicating with the support staff.

You can easily upload these test results to the Certification system.

[\[Upload the test results\]](#)

Viewing this Page Again

This page has been saved as a part of the test run results. You may view it at any time by clicking particular test result at the [Results](#) page.

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If you want to see the detailed report, just click the “View detailed report”.

The detailed report will be shown like blow:

The screenshot shows the 'Test Results-Mozilla Firefox' window. The browser address bar displays the URL: http://192.168.7.2:8888/tests_results.pl?details=x86-64-qemux86-64-2011-04-02-09h-23m-17s. The page header includes the Linux Foundation and LSB Distribution Checker logos, along with navigation links: 'Get Certified', 'Custom Tests', 'Execution', 'Results', 'Help', 'About', and 'Administration'.

Configuration information from the journal

VSX_NAME	lsbcmdchk 4.1.0-1 (x86_64)
LSB_VERSION	4.1

Problem Summary

Click on lines in the table to see the details about each problem.

Test Name	Severity	Resolution
foomatic-rip 1	failed	
Comment:		
Test Purpose Comment: Looking for command foomatic-rip		
Open the Journal:		
/var/opt/lsb/test/manager/results/x86-64-qemux86-64-2011-04-02-09h-23m-17s/results/cmdchk.journal:312		
Click here to see the details about each problem		
ss 1	failed	
ss 1	failed	
ip 1	failed	
lpr 1	failed	
remove_initd 1	failed	
sendmail 1	failed	
xdg-desktop-icon 1	failed	
xdg-desktop-menu 1	failed	
xdg-email 1	failed	
xdg-icon-resource 1	failed	
xdg-mime 1	failed	
xdg-open 1	failed	
xdg-screensaver 1	failed	

Journal statistics:

Tests Total	150
Tests Passed	136
Tests Failed	14

Library Check v. 4.1.0-1

The libchk test suite is used to check if the runtime libraries contain all of the interfaces with correct versions as specified by the LSB specification.