Linux Kernel Testing BOF

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Kernel testing is everybody’s business
- Jon Corbet
Who am I

Tsugikazu Shibata, NEC
Project lead of LTSI
Member of CE Working group
Member of the board of the Linux Foundation
Key activities of LTSI
Long Term Support Initiative

- Providing a industry managed kernel and maintain Long Term
- Providing a common place for embedded industry to share information: Mailing list, Workshop ...
- Providing place to support upstream activity : Help industry developer

• LTSI had been started 2011 in Prague
Expected people for this BoF

• People who are working for the products and/or services using Linux (kernel)
  – Sometimes become Linux developer and then becomes engineer using Linux
  – And taking care about testing and fixing problem (if it’s happened)
A primary purpose of testing is to detect software failures so that defects may be discovered and corrected.
A example of product development process

Cost of fix a defect

- Design
- Code
- Test
- Shipment
- Customer service
Software Engineering people says

• Defects can be fixed with lower cost in earlier phase. The earlier phase, the better.

• In case of Open Source, what is the earlier phase?
A example of product development process

Cost of fix a defect

Upstream  LTSI  Design  Code  Test  Shipment  Customer service

Community  Company’s work
Community tests

Testing activities in the community:

• Selftest: Shuah Khan is leading in upstream

• LTSI has automated test infrastructure
You can download from:
https://bitbucket.org/cogentembedded/jta-public/
LTSI Automated tests result

28 benchmarks and 33 test programs are integrated in test environment
Points of discussion

1. Joining Community’s testing
   – How about push the companies’ in-house tests into the community

2. What kind of tests can be pushed back

3. Fixing defects found in in-house tests
1. Joining community testing

- Companies have number of test packages and push back to community may beneficial
  - Earlier the better
  - No need to spend cost
- Community test would be
  - Simple, Automated
  - Take not too much time to run
2. What kind of tests can be pushed back

- Basic tests
- Driver tests
- Others?
3. Fixing defects found in in-house tests

- In-house patch VS send patches to upstream
- Sending patch to upstream is the best way but...
You can participate LTSI

- Follow on Twitter account: @LinuxLTSI
- Web: http://ltsi.linuxfoundation.org
- Mailing list: https://lists.linuxfoundation.org/mailman/listinfo/ltsi-dev
- Git tree: http://git.linuxfoundation.org/?p=ltsi-kernel.git;a=summary
THANK YOU

LONG TERM SUPPORT INITIATIVE