Contributing to the openSUSE distribution

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Novell
Status Quo
How it is
Status Quo – How it is

SUSE internal Autobuild

Factory sources

Factory binaries

openSUSE Build Service
Add-On builds

Factory sources

Factory binaries

×
Status Quo – How it is

• Everybody wants to submit changes as easy as possible
• Everybody has a different trust relationship
• Packagers have different working methods
• Packages have different requirements
• Everybody wants a stable base for testing his changes
• The software pool within openSUSE build service is used for multiple distributions, with different requirements

-> multiple workspaces, defined processes
Status Quo – How it is
Example Quality Requirements

SLE / EAL class requirements:
• Full source review before check-in
• 7 years of full maintenance

openSUSE distribution requirements:
• Source peer review (is this really enough?)
• 2 years of security maintenance

Leaf package requirements:
• Fulfillment of guidance principles
• The package should benefit the whole distribution
Contribution Processes
How it could be
How it could be

Contributers

openSUSE
How it could be

Contributers Non-Core

Contributers Core

openSUSE

„Core“

„Non-Core“
Contribution to the Distribution

Which packages should be part of the distribution?
Package based Contribution Process

Requirements

• Make contributions as easy as possible
• Involve all types of contributors. From Beginners to the most powerful ones
• Only the best packages become part of openSUSE
• openSUSE must be innovative and at the same time stable
• openSUSE must be secure and maintained
## Package based Contribution Process

<table>
<thead>
<tr>
<th>Package</th>
<th>Attributes</th>
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<tbody>
<tr>
<td></td>
<td><strong>is_stable_version_number=true</strong></td>
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<td><strong>number_of_installs=10000</strong></td>
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<td><strong>is_setuid=false</strong></td>
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<td><strong>runs_as_system_daemon=false</strong></td>
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<td><strong>runs_as_root=false</strong></td>
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<td><strong>number_developers=20</strong></td>
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<td><strong>links_incompatible_license=false</strong></td>
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<tr>
<td></td>
<td><strong>was_before_part_of_distro=true</strong></td>
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</tbody>
</table>
Package based Contribution Process

- Quality
- Security
- Trust
- Innovation
- Maintenance
- Legal
Package based Contribution Process

Info Provider:

- The Package owner
- The distribution owner
- A user rating/trust system
- A package popularity system
- Bugzilla
- BuildService
- Different openSUSE Teams (Security, Usability etc.)
Package based Contribution Process

security_relevant = listens_on_port || is_setuid || runs_as_system_daemon || runs_as_root;

quality_value = is_stable_version_number * 100
               + upstream_active_development * 50
               + upstream_has_stable_branch * 100
               - number_of_new_red_bugs_last_6_months * ( 10 + security_relevant * 20 )
               - number_of_open_bugs * ( 5 + security_relevant * 10 );

wanted_package = provides_core_functionality == true
                 || widely_used == true
                 || ( unique_functionality == true && desired_functionality == true )
                 || ( was_before_part_of_distro == true && desired_functionality == true );
Contribution to Packages
Working on Sources/Packages
Future Source Handling Process I

Open Project:
+ Immediate effect in project
+ Fastest way to work on project
- Peer review only
- Can block finish package building
- Everybody can add/remove packages

* Defined users ( ) can do everything
Future Source Handling Process II

Open Packages:
+ Immediate effect in packages
+ Fastest way to work on package
- Peer review only
- Can block finish package building

* Admin (👤) defines used packages
Future Source Handling Process III

Closed Project:
+ Review before check-in
+ QA happens before check-in
+ Time coordinate check-ins
- Slows down development in X

* Admin (👤) merges requested changes or refused with given reason
A Possible Example Setup

SLE Contributors

openSUSE

Source Link

„SLE Core“

glibc

Source Link

with patch

x.org

Source Link

x.org

„Factory“

glibc

+ patch

linux
Another Possible Example Setup

SLE Contributors

„SLE Core“
glibc

openSUSE

„Factory“
xplanet

Use Binary Repository

linux x.org

wine

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Missing Parts
Missing Components

• Efficient patch handling
• Merge handling
• Defined package requirements for Factory
  -> en.opensuse.org/Contribute
• User Trust Relationship System
• Relation of bug statistics to packages
• Overall UI concept
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