Testing of Fedora

Making sure Fedora is not (utterly) broken

Presented by
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Fedora QA
Fedora Quality Assurance

- https://fedoraproject.org/wiki/QA
- Primary objective is to ensure project quality, i.e. the most important pieces must work correctly
- Main focus:
  - testing of development milestones of upcoming Fedora releases
  - development of automation and support tools
  - testing of important software updates
  - communication with testers community
Small team, important tasks

- A lot of tasks for a very small team
  - people from Red Hat - USA (2), Canada (1), Czech Republic (4), China (1), India (1+interns)
  - of course, community helps tremendously
- Some manual testing (general Linux knowledge), some coding (Python, Bash, Perl)
- A lot of communication with the community using mailing lists and IRC
- Community is the key - encouraging people to participate
Automation tools

- Taskotron
- openQA
- Koschei
Taskotron

- Automated task execution framework
- Listen to fedmsg, run tasks, store results
- Rpmlint, rpmgrill, upgradepath, depcheck
- Talk on Friday: “Taskotron: Create automated, package-specific test”
openQA

- Tool made by openSUSE
- Opencv to match patterns on screen
- Mouse movement and keyboard input – VNC
- Graphical frontend for creating images for recognition
- Today’s talk: OS-level testing with openQA
Other responsibilities

- Testing of composes, release testing
  - Blocker bugs
  - Test days
- Updates testing
Test matrices

- Nightly compose testing, release composes
- Release testing: Alpha → Beta → Final
- Both on hardware and on virtual machine
- Blocker bugs
- OpenQA
# Test matrices

## Installation repositories

<table>
<thead>
<tr>
<th>Milestone</th>
<th>Test Case</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alpha</td>
<td>QA:Testcase_install_repository_Mirrorlist_graphical</td>
<td>![coconut]</td>
</tr>
<tr>
<td>Alpha</td>
<td>QA:Testcase_install_repository_HTTP/FTP_graphical</td>
<td>![coconut]</td>
</tr>
<tr>
<td>Alpha</td>
<td>QA:Testcase_install_repository_HTTP/FTP_variation</td>
<td>![pschindl]</td>
</tr>
<tr>
<td>Beta</td>
<td>QA:Testcase_install_repository_NFS_graphical</td>
<td>![coconut]</td>
</tr>
<tr>
<td>Beta</td>
<td>QA:Testcase_install_repository_NFS_variation</td>
<td>![coconut]</td>
</tr>
<tr>
<td>Final</td>
<td>QA:Testcase_install_repository_NFSISO_variation</td>
<td>![inie]</td>
</tr>
<tr>
<td>Final</td>
<td>QA:Testcase_install_repository_Hard_drive_variation</td>
<td>![inie]</td>
</tr>
</tbody>
</table>

## Package sets

<table>
<thead>
<tr>
<th>Milestone</th>
<th>Test Case</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beta</td>
<td>QA:Testcase_Package_Sets_Minimal_Package_Install</td>
<td>![coconut]</td>
</tr>
<tr>
<td>Optional</td>
<td>QA:Testcase_Package_Sets_KDE_Package_Install</td>
<td>![coconut]</td>
</tr>
</tbody>
</table>
Fedora Test Days

- Testing is focused on one feature
- Developers and testers are actively present on irc
- Problems get debugged and solved quicker
- Good opportunity to try new features
F24 Workstation Graphical Upgrade


Go back to [List of Events](#).

Results

Clicking on the testcase name will show you the appropriate "how to test" page.
Click on the **Enter result** button, to enter result.

**Note**: results are cached and reloaded from the database each 10 seconds.

Tests

<table>
<thead>
<tr>
<th>Username</th>
<th>Profile</th>
<th>Testcase Workstation Graphical Upgrade</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Akashray</td>
<td>Fedora 23</td>
<td><a href="#">✓</a></td>
<td>1. Thanks Sumantro for mentoring</td>
</tr>
<tr>
<td>Akshitlinux</td>
<td>Fedora 23</td>
<td><a href="#">✓</a></td>
<td>1. Took more time than usual to update</td>
</tr>
<tr>
<td>AmySt.</td>
<td>Fedora 23</td>
<td><a href="#">✓</a></td>
<td></td>
</tr>
</tbody>
</table>
Blocker Bugs

- Anyone can propose a specific bug as a blocker for the next Fedora release ("blocker bug")
- We have predefined criteria for which bugs are blockers and which bugs are not
- Blocker bugs have highest priority, we help developers find the problem and test the fix
### 1 Proposed Blocker

<table>
<thead>
<tr>
<th>Bug ID</th>
<th>Component</th>
<th>Status</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>1361338</td>
<td>systemd</td>
<td>NEW</td>
<td>Connecting to /dev/log gets Connection Refused</td>
</tr>
</tbody>
</table>

### 3 Accepted Blockers

<table>
<thead>
<tr>
<th>Bug ID</th>
<th>Component</th>
<th>Status</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>1358416</td>
<td>anaconda</td>
<td>NEW</td>
<td>&quot;Error setting up software source&quot; when attempting a Network installation</td>
</tr>
<tr>
<td>1352680</td>
<td>efibootmgr</td>
<td>NEW</td>
<td>efibootmgr calls in anaconda crashing since efivar-0.24-1.fc25 landed</td>
</tr>
<tr>
<td>1353054</td>
<td>pki-core</td>
<td>NEW</td>
<td>FreeIPA server deployment fails due to pki-core dangling symlinks (one from non-installed 'scannotation' package, one formerly in resteasy-jaxrs-api but now lost)</td>
</tr>
</tbody>
</table>

### No Proposed Freeze Exceptions
Software updates testing

- Bodhi
- Only in stable and soon-to-be-stable releases
- The path of update to Fedora distribution
  - Update is built → Proposed for testing → Waiting for karma → Pushed to stable
Software updates testing

Fedora Update System

This week's top testers

1. carpentis (1897)
2. fliperosset (1254)
3. hreindl (1242)
4. yuwaata (1145)
5. ptemade (1039)

Latest Critical Path Updates In Need of Testing

<table>
<thead>
<tr>
<th>Update</th>
<th>Age</th>
<th>Submitter</th>
</tr>
</thead>
<tbody>
<tr>
<td>libdv-1.0.0-22.fc24</td>
<td>2 days</td>
<td>sagitter</td>
</tr>
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<td>2 days</td>
<td>sagitter</td>
</tr>
<tr>
<td>nautilus-3.20.2-1.fc24</td>
<td>2 days</td>
<td>klev</td>
</tr>
<tr>
<td>json-glib-1.2.2-1.fc24</td>
<td>2 days</td>
<td>klev</td>
</tr>
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<td>json-glib-1.2.2-1.fc23</td>
<td>2 days</td>
<td>klev</td>
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</tbody>
</table>

Latest Security Updates In Need of Testing

<table>
<thead>
<tr>
<th>Update</th>
<th>Age</th>
<th>Submitter</th>
</tr>
</thead>
<tbody>
<tr>
<td>drupal7-crumbs-2.5-1.el5</td>
<td>2 days</td>
<td>siwinski</td>
</tr>
<tr>
<td>nodejs-0.10.46-1.el6</td>
<td>3 days</td>
<td>ptemade</td>
</tr>
</tbody>
</table>
Plans for future

- Automate desktop testing (behave+dogtail, openQA?)
- Beaker
- Better coverage of tests
How to help with testing

- [https://fedoraproject.org/wiki/QA/Join](https://fedoraproject.org/wiki/QA/Join)
- [#fedora-qa on irc.freenode.net](https://fedoraproject.org/wiki/IRC/)
- Test mailing list
  [https://admin.fedoraproject.org/mailman/listinfo/test](https://admin.fedoraproject.org/mailman/listinfo/test)
- Add QA calendar
- Join some test day:
  [https://apps.fedoraproject.org/calendar/QA/](https://apps.fedoraproject.org/calendar/QA/)
- Use ABRT
- Provide karma
Try Rawhide

- https://fedoraproject.org/wiki/Releases/Rawhide
- For those who likes new technologies
- This is where new Fedora is born
Links

- QA: https://fedoraproject.org/wiki/QA
- BZ: https://bugzilla.redhat.com/
- Bodhi: https://admin.fedoraproject.org/updates/
- Test days: https://apps.fedoraproject.org/calendar/list/QA/?subject=Test+Day
- Blocker bug app: https://qa.fedoraproject.org/blockerbugs
- Rawhide: https://fedoraproject.org/wiki/Releases/Rawhide
Links to testing matrices

- **Installation:**
  https://fedoraproject.org/wiki/Test_Results:Current_Installation_Test

- **Base:**
  https://fedoraproject.org/wiki/Test_Results:Current_Base_Test

- **Desktop:**
  https://fedoraproject.org/wiki/Test_Results:Current_Desktop_Test

- **Server:**
  https://fedoraproject.org/wiki/Test_Results:Current_Server_Test

- **Cloud:**
  https://fedoraproject.org/wiki/Test_Results:Current_Cloud_Test
Questions?

Contact: pschindl@redhat.com