

Zabbix: Quality, Humans and Fun

Quality

- We all love new features
- We all hate bugs
- How Zabbix gets both?

Features are added...



...but problems creep in

- Bugs
- Unfinished features

What causes bugs?

- Developers

What causes bugs?

- ~~Developers~~
- Processes
- Attitude, experience
 - Lack of real world exposure
 - Underestimating

How Zabbix deals with that

- “Little” things matter
 - Commit messages / code comments
 - Attention to detail (trailing whitespace)
 - Testing / initial quality

Commit mess-what?

- 2001
 - Some fixes.
- 2005
 - Fixed bugs.
- 2008
 - misc bugs
- 2010
 - disc triggers +-
- 2010
 - bugs

r13261 | anonymous | 2010-07-12 11:03:17 +0300 (Mon, 12 Jul 2010) | 1 line

r13254 | anonymous | 2010-07-09 18:18:15 +0300 (Fri, 09 Jul 2010) | 1 line

r13251 | anonymous | 2010-07-09 16:09:13 +0300 (Fri, 09 Jul 2010) | 1 line

r13249 | anonymous | 2010-07-09 15:17:41 +0300 (Fri, 09 Jul 2010) | 1 line

r13248 | anonymous | 2010-07-09 11:57:34 +0300 (Fri, 09 Jul 2010) | 1 line

r13247 | anonymous | 2010-07-09 11:50:49 +0300 (Fri, 09 Jul 2010) | 1 line

r13238 | anonymous | 2010-07-08 17:46:18 +0300 (Thu, 08 Jul 2010) | 1 line

r13237 | anonymous | 2010-07-08 17:45:17 +0300 (Thu, 08 Jul 2010) | 1 line

r13236 | anonymous | 2010-07-08 17:42:05 +0300 (Thu, 08 Jul 2010) | 1 line

r13235 | anonymous | 2010-07-08 17:21:21 +0300 (Thu, 08 Jul 2010) | 1 line

r13232 | anonymous | 2010-07-08 16:47:30 +0300 (Thu, 08 Jul 2010) | 1 line

r13229 | anonymous | 2010-07-08 15:11:51 +0300 (Thu, 08 Jul 2010) | 1 line

r13226 | anonymous | 2010-07-08 13:36:10 +0300 (Thu, 08 Jul 2010) | 1 line

r13225 | anonymous | 2010-07-08 13:15:37 +0300 (Thu, 08 Jul 2010) | 1 line

r13222 | anonymous | 2010-07-08 12:04:18 +0300 (Thu, 08 Jul 2010) | 1 line

r13216 | anonymous | 2010-07-08 11:01:22 +0300 (Thu, 08 Jul 2010) | 1 line
sync

r13215 | anonymous | 2010-07-08 10:55:28 +0300 (Thu, 08 Jul 2010) | 1 line

r13202 | anonymous | 2010-07-07 13:20:11 +0300 (Wed, 07 Jul 2010) | 1 line

r13201 | anonymous | 2010-07-07 13:08:18 +0300 (Wed, 07 Jul 2010) | 1 line

r13184 | anonymous | 2010-07-05 16:28:26 +0300 (Mon, 05 Jul 2010) | 1 line

Think positive

- We are improving
 - Hammer method: pre-commit hook
 - Better commit messages, yay!

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When using `zbx_vector_str_create()` and `zbx_vector_str_append()`, it is important to not forget deallocate memory used for string vector elements before calling `zbx_vector_str_destroy()`.

Before ZBX-4802 the memory deallocation was done in `print_packages()` function.

Trying to improve code clarity, the ZBX-4802 was registered but it was solved incorrectly.

The new solution for ZBX-5571 puts the memory deallocation in the same function where it is allocated.

This change also solves ZBX-5559 as the fix is trivial and in the same file as for ZBX-5571.

In JMX monitoring to get the value of a monitored item we specify object name and attribute name. If the value is composite we specify also the field name. The composite data can be nested so a real attribute name and fields are separated by dots. E. g.

```
jmx[com.example:Type=mytest,myattribute.compData.field1]
```

But sometimes an attribute name or a composite data field name can contain dot. Before this fix it was not possible to monitor such item.

This fix enables support for dots in attribute name, which just need to be escaped with a backslash. E. g.

```
jmx[com.example:Type=mytest,my\\.attribute.comp\\.data.field\\.1]
```

Function `zbx_db_connect()` in `src/libs/zbxdb/db.c` catches a number of various database errors and re-maps them to `ZBX_DB_DOWN` to retry connecting later. MySQL error `CR_UNKNOWN_HOST` was not included in the re-mapping.

Before this fix:

If MySQL server hostname became unresolvable, processes with established connections to MySQL continued to work. When the housekeeper process woke up it exited due to database unavailability causing termination of other processes.

After this fix:

MySQL error `CR_UNKNOWN_HOST` is turned into `ZBX_DB_DOWN`. The housekeeper process does not exit and tries to connect later.

Everybody benefits

- Developers re-think changes
- Other developers can follow the process
- Users can follow the process

Enzyme?

- Any interest in commit digests?

ENZYME

Review

Danny Allen

Settings

Logout

Insert

Review

Classify

Digests

Tools

Users

Commit 1171727 by Artur Duque de Souza (asouza)

Support for configChanged() on pastebin applet Implement the new configChanged() slot needed specially by scripted stuff that may trigger updates on the applets configuration

Commit 1171728 by Friedrich W. H. Kossebau (kossebau)

changed: make method palette() const

Commit 1171729 by Allen Winter (winterz)

turn floating point constants into qreal's when passing them to qMin or qMax. found when testing the new Krazy plugin for checking this condition.

Commit 1171730 by Jonathan Michael Thomas (jmthomas)

Share a bit more code in MuonMainWindow

Commit 1171731 by Andrius Štikonas (stikonas)

i18n: Pluralize the string.

Selected 1 of 5 commits reviewed (99 total)

Save

Quality matters

- Overall + the development branches
 - Amount of testers
 - Faster feedback
 - Quality of the released product

Improving branches

- Separate dev branch
- Review
- Testing (Hudson)

Let's write specifications

Automatic upgrade of database structure

[ZBXNEXT-1322](#) 

Status: **v1.4**

Owner: **Alexei Vladishev**

Summary

Currently in order to upgrade from one major version to another manual execution of database patches is required. It will be improved so that Zabbix itself would update the database automatically.

Specification

On startup Zabbix server/proxy will verify if its database version matches current Zabbix database version stored in the database. If Zabbix server/proxy is newer, it will execute patches before doing anything else.

Details

General

- This functionality will be supported by both Zabbix server and proxy.
- Patches will be stored in the binaries for at least 5 major releases.
- It will support situation when a new patch is added for several releases, for example, both 2.2 and 2.4. a patch must be executed only once doing upgrade from 2.0 to 2.4.

Better documentation

- Commit messages
- Specifications
- Yes, developers have to write docs

Everything should be documented (duh).
This should be a top priority, because
without proper documentation everything
else we do is virtually pointless.

Zabbix frontend developer Pavels

They don't get it!

- Usability
- The real world... it's different

Help us!

- Early feedback = good feedback
- Test dev branches, RCs
- Financed a feature? Be involved

<fixinko> hi guys, have you an idea how to upgrade large (~223GB) zabbix mysql database from 1.8.12 to 2.0.0 ?

<side_control> fixinko: very slowly?

Wat, no bugs?

800



525



Improving quality further

- More unittests
- Your feedback
- “No regression policy”?

...you thought the code was more important than the user. Which is not true.

Linus

Zabbix translators rock

- 6 translations at 100% for 2.0.3
 - Chinese (Taiwan)
 - English (United States)
 - French
 - Japanese
 - Russian
 - Ukrainian

Zabbix office

- Split up
- Quiet (with some exceptions)

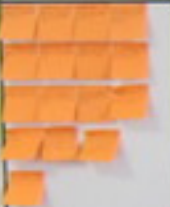
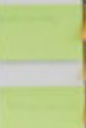




ZABBIX















































The Enterprise-class Monitoring Solution for Everyone

ANALYSIS

TOP

| Epics | Analysis | Features | Ready for development |
|-------|---|---|--|
| | | available to customer | • User story • Design • Acceptance tests |
| | |  | |
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| Features |
|---|
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| Bugs |
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| Task stories |
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| Planned | ZABBIX The Monitoring Solution | In progress | Finished | Code review | Reviewed | Test | Merged |
|---|--|---|---|---|---|---|---|
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Bugs

| | | |
|-------|-----|------|
| 27.08 | 646 | |
| 03.09 | 592 | - 54 |
| 10.09 | 560 | - 32 |
| 17.09 | 571 | + 11 |

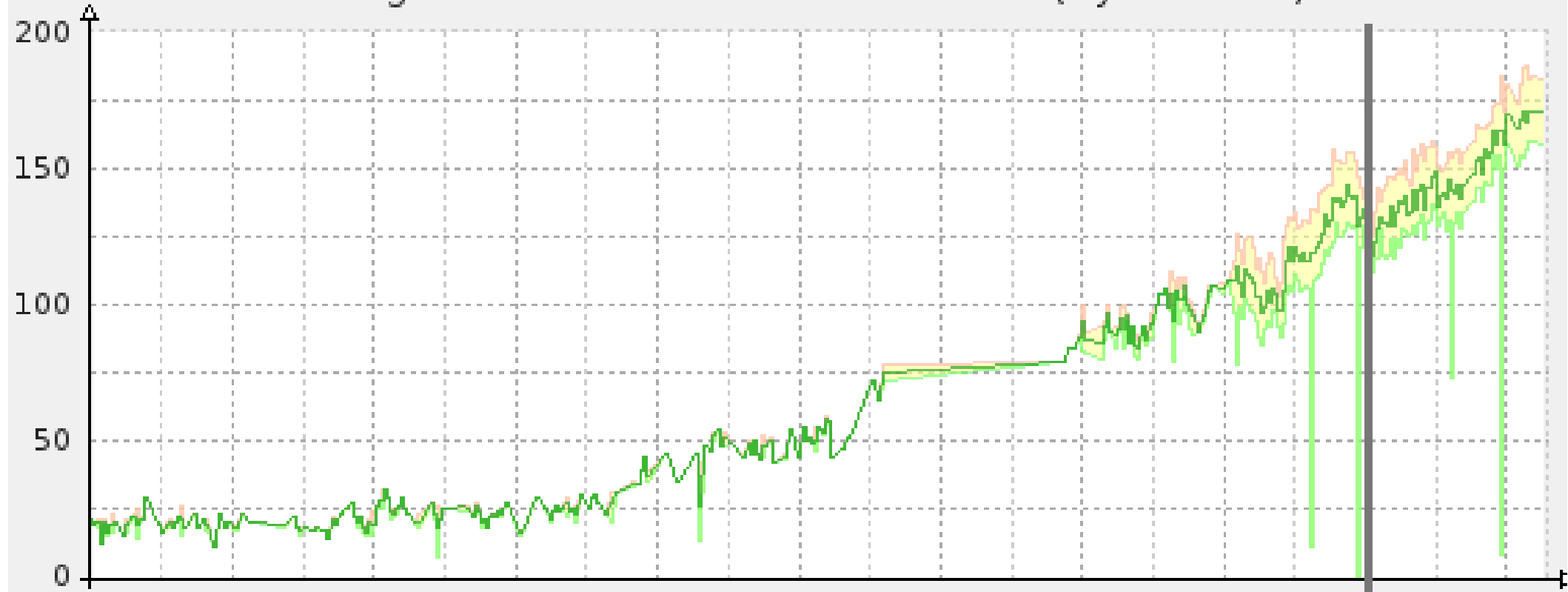
Top voted Zabbix feature requests as of **2012.05.01**, compared to **2012.04.02**

** marks issues that are new in the top, compared to previous report

| Place | Issue | Description | Reporter | Created | Votes |
|--------|-------------|---|----------------------------|-------------|---------|
| 1 | ZBXNEXT-1 | Handle item values in graph/trigger titles/descriptions | Gergely Czucz | 2009 Jun 30 | 90 (+1) |
| 2 | ZBXNEXT-20 | web scenarios should be able to be template members | Marty Sharfnon | 2008 Jan 15 | 62 (+1) |
| 3 | ZBXNEXT-340 | need ability to alert on UNKNOWN state | Brett Lentz | 2010 May 04 | 42 (+4) |
| 4 (+) | ZBXNEXT-17 | daemon communication encryption | Szep csaba | 2009 Jun 30 | 38 (+3) |
| 5 (-) | ZBXNEXT-10 | need a command-line import/export facility | Marty Shannon | 2008 Jan 14 | 37 |
| 6 | ZBXNEXT-104 | switch trigger to OK based on acknowledgement by user | David M. Zendzian | 2009 Oct 23 | 31 (+1) |
| 7 | ZBXNEXT-18 | Action & Acknowledgement Alerts | Sol Arioto | 2009 Feb 09 | 29 (+1) |
| 8 | ZBXNEXT-628 | "Template with application xxx already linked to host" | Bart Verwilt | 2010 Aug 09 | 28 (+1) |
| 9 | ZBXNEXT-413 | Maintenance Period on Trigger/service level | Florian Koch | 2010 Jun 17 | 24 |
| 10 | ZBXNEXT-418 | runtime control of zabbix daemons | richlv | 2010 Jun 19 | 24 (+1) |
| 11 | ZBXNEXT-71 | Better permission granularity | Johan Segernas | 2009 Sep 15 | 22 |
| 12 (+) | ZBXNEXT-98 | Use SNMP getbulk for OID retrieval | Gergely Czucz | 2009 Oct 06 | 20 |
| 13 (-) | ZBXNEXT-247 | Built-in feature to export reports and statistics | Emil Odepark | 2010 Feb 22 | 20 |
| 14 (-) | ZBXNEXT-570 | create automated group graph to see an item for a whole group | ghislain | 2010 Nov 29 | 20 |
| 15 (-) | ZBXNEXT-222 | Firefox plug-in for viewing zabbix events | Murilo Moreira de Oliveira | 2010 Feb 03 | 20 |
| 16 | ZBXNEXT-207 | Scheduled Housekeeping | Peters | 2010 Jan 19 | 20 |
| 17 (+) | ZBXNEXT-473 | Ability to Check Now a specific passive item | Robert Hau | 2010 Aug 17 | 19 (+2) |
| 18 (-) | ZBXNEXT-242 | Support user macros in graph names | Alexey Pustovalov | 2010 Feb 18 | 19 (+1) |
| 19 | ZBXNEXT-389 | macros are not available in web scenarios | Alexander Pivlov | 2010 May 28 | 15 |
| 20 | ZBXNEXT-136 | improved debugging/logging controls | richlv | 2009 Nov 20 | 15 (+1) |

Thanks & see you later

Zabbix.org: Users in #zabbix on freenode (6y 3m 21d)



(probably in #zabbix on Freenode)