

Zabbix Development Process

A way of constant improvements

What is all about

- What tools do we use
- Zabbix Coding Standard
- Where we are with Zabbix 2.0
- New release policy
- How can Zabbix user help us?

What tools we use?

Developers are free to choose their own tools

Version Control System

- Past: CVS hosted on Sourceforge site
- Now: standalone Subversion (SVN) server

```
svn checkout svn://svn.zabbix.com/trunk
```

```
svn checkout svn://svn.zabbix.com/branches/1.8
```

```
svn checkout svn://svn.zabbix.com/tags/1.8.8
```

```
./bootstrap.sh
```

Bug Tracking System

- Jira powered by Open Source License from Atlassian
- ZBX – publicly available bug tracker

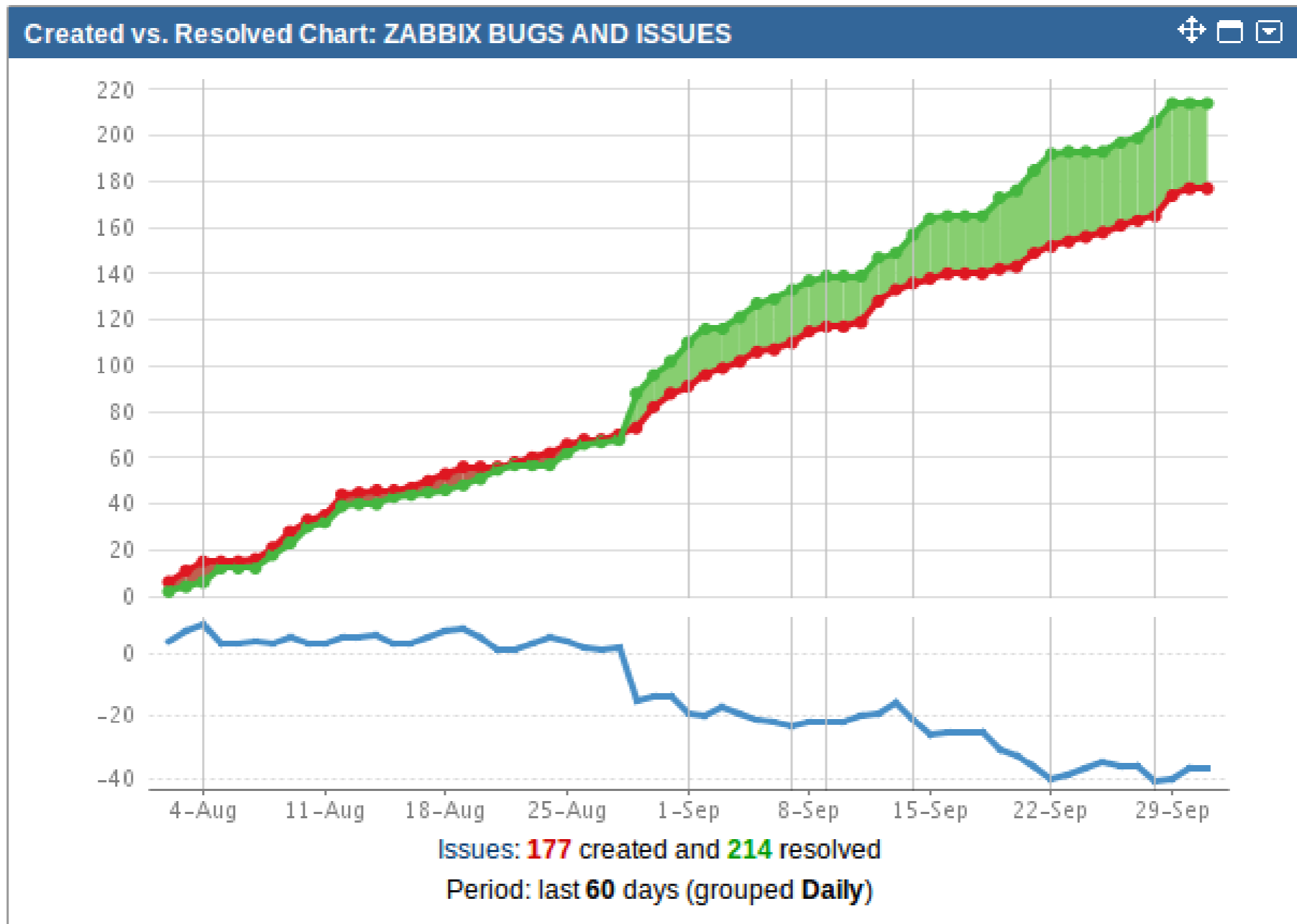
<https://support.zabbix.com/browse/ZBX>

- ZBXNEXT – list of feature requests
 - <https://support.zabbix.com/browse/ZBXNEXT>
 - Vote for your favorites!
- YOUR_COMPANY – your company's tickets
 - For paid customers only

Jira

Favorite Filters	
2.0 scheduled blocker issues	85
2.0 unreviewed issues	581
Customers: bugs	41
Customers: bugs + other	64
Not updated for 1 week and not closed or resolved	59
ZABBIX problems	663
Create Filter Manage Filters	

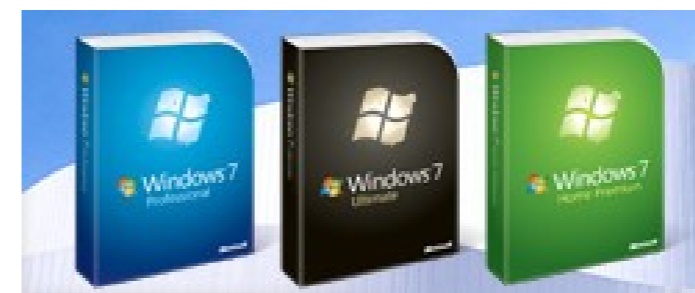
Jira



Operating Systems

- C developers
 - Mostly Ubuntu and Debian desktops
- PHP Developers
 - Ubuntu or Windows

ubuntu[®]



Development tools

- C developers
 - Linux shell environment
 - `vi/emacs` + `gcc` + `svn`
- PHP Developers
 - NetBeans, Eclipse, PHPStorm
 - Tortoise SVN

Test systems/compile farm

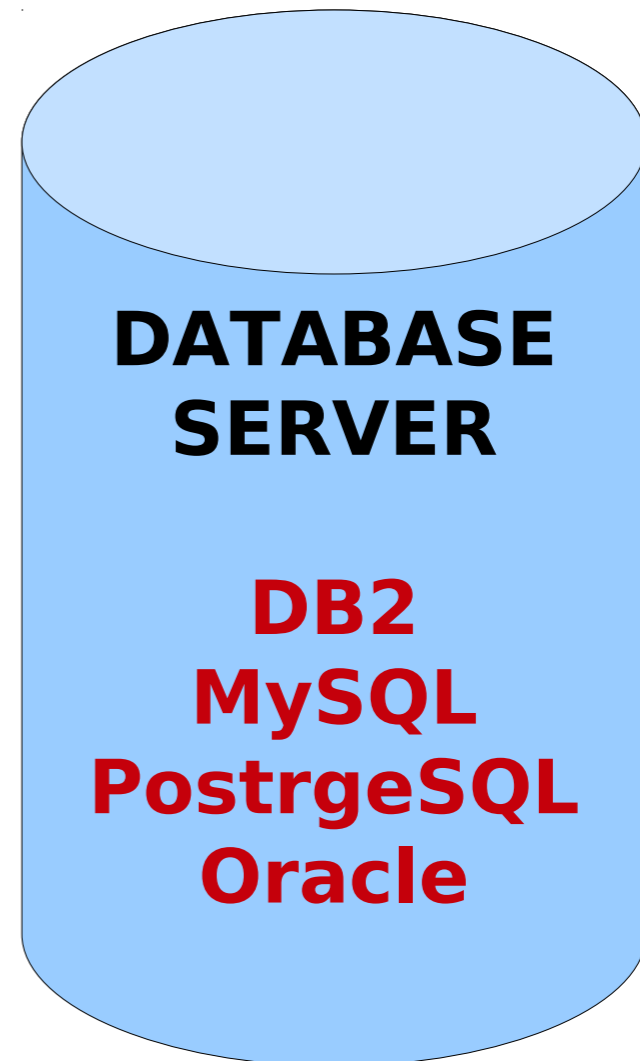
- VMWare visualization, with more than 20 Intel platforms
 - All flavors of Linux (RedHat, Debian, Ubuntu, CentOS, ...)
 - OpenBSD, NetBSD, FreeBSD
 - OpenSolaris
 - Windows
- Access to non-Intel platforms is provided by our partner

Operating Systems: [AIX](#), [HP-UX](#), [Solaris](#)

Hardware platforms: [Itanium](#), [PA-RISC](#), [PowerPC](#), [Sparc](#)

Standalone database server

- Consolidated database server
- Four database engines
 - MySQL
 - PostgreSQL
 - Oracle
 - DB2



Continuous integration and unit testing

- Hudson + PHPUnit + Selenium
- 2338 tests at the moment executed automatically
 - Located under `frontends/php/tests`
 - Also under `build.xml`: build test, DB creation, making binaries

A simple test

```
public function testFormLogin_LoginOK(){
    $this->login('dashboard.php');
    $this->assertTitle('Dashboard');
    $this->click('link=Logout');
    $this->wait();
    $this->ok('Username');
    $this->ok('Password');

    $this->input_type('name','Admin');
    $this->input_type('password','zabbix');
    $this->click('enter');
    $this->wait();

    $this->nok('Password');
    $this->nok('Login name');
}
```

Hudson



Hudson

[ENABLE AUTO REFRESH](#)

- [New Job](#)
- [Manage Hudson](#)
- [People](#)
- [Build History](#)



Chuck Norris Approves

I've never had a team better!

[edit description](#)

All +						
S	W	Job ↓	Last Success	Last Failure	Last Duration	
		Trunk-MYSQL	21 hr (#532)	23 days (#509)	2 hr 28 min	
		Trunk-POSTGRESQL	1 day 6 hr (#983)	27 days (#902)	11 min	
		Trunk-SQLITE3	21 hr (#504)	23 days (#481)	1 hr 23 min	

Icon: [S](#) [M](#) [L](#)

Legend [for all](#) [for failures](#) [for just latest builds](#)

Zabbix Coding Standard

It is here!

Zabbix Coding Standard

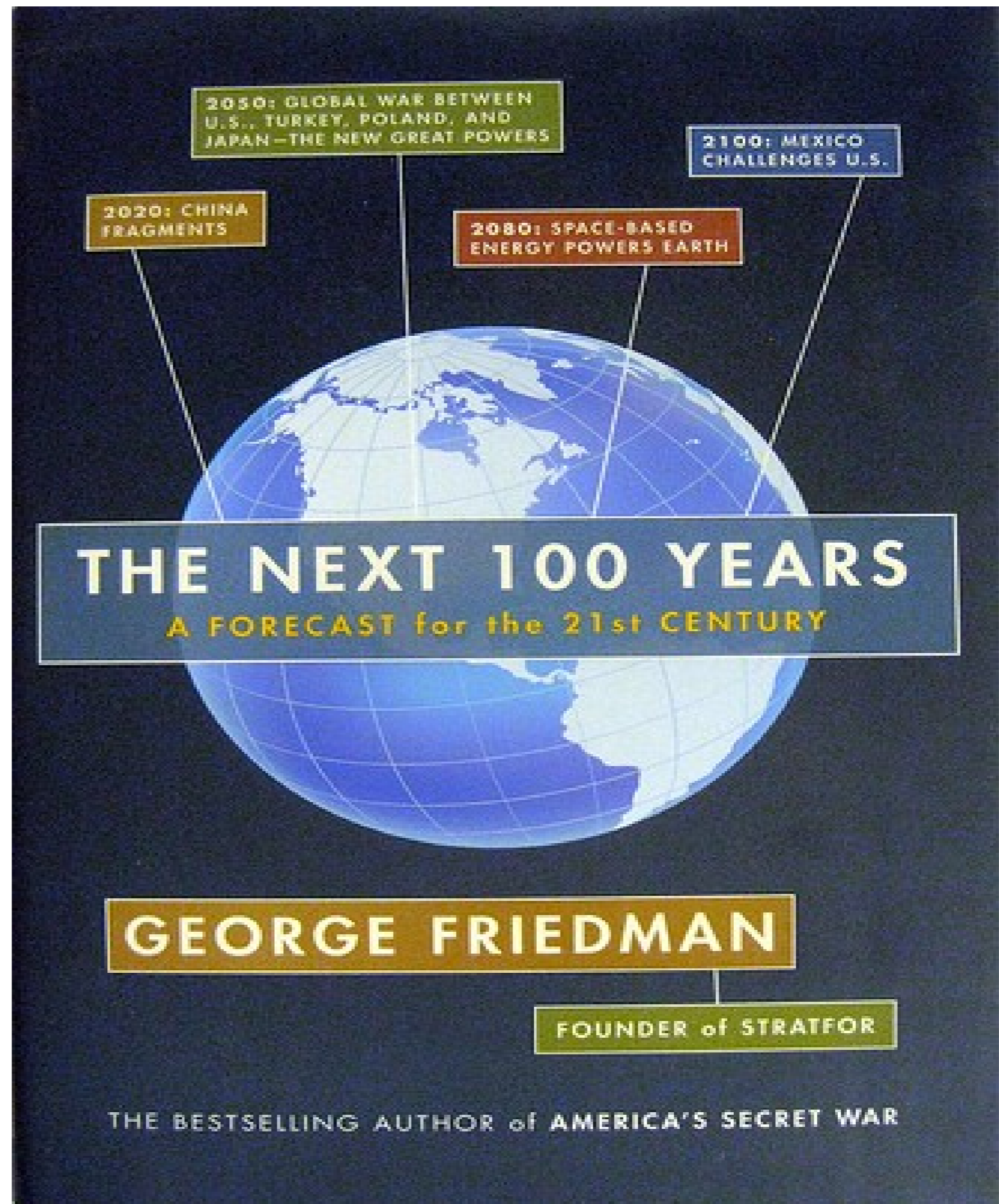
- We've been working on this for more than one year
 - Coding Style (formatting for C, PHP, Java)
 - Development Conventions (Working with Jira/Subversion)
- It is not available publicly currently

Alexei's ~~prediction~~ promise:

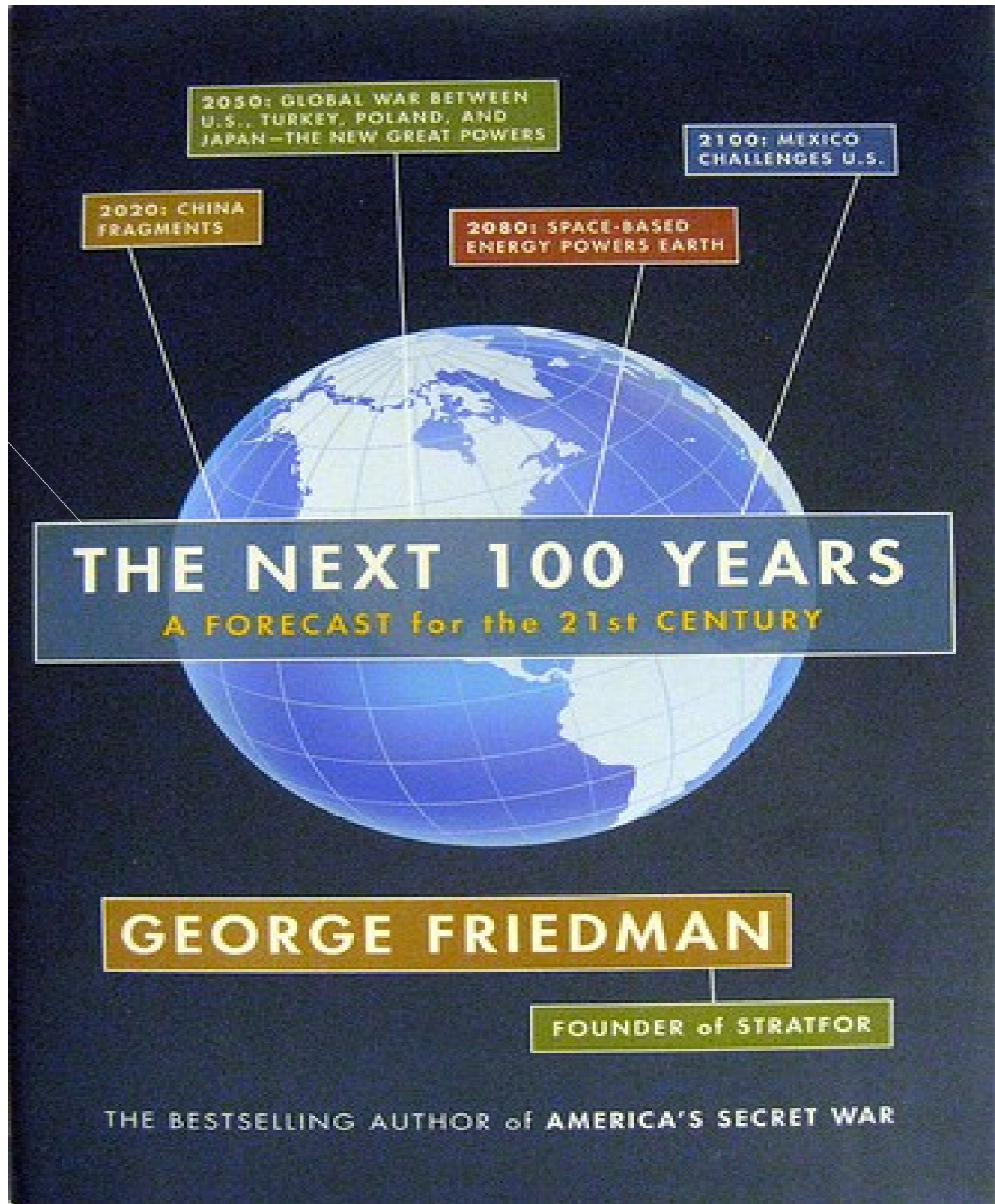
“Zabbix Coding Standard will be made publicly available within next week!”

Where is Zabbix 2.0!?

Well...



**2050:
Zabbix 2.0 is out**





Early 2010:

Alexei: *“Zabbix 2.0 will be released in September 2010, otherwise I’ll eat my hat”*

Hats eaten



September 2010:

Alexei: "Zabbix 2.0 will be released in May 2011, otherwise I'll eat my hat"



Hats eaten



May 2011:

Alexei: "Zabbix 2.0 will be released in August 2011, otherwise I'll eat my hat"



Hats eaten



Zabbix Conference 2011, October 1:

Alexei: "No comments"

I am very bad at making predictions!

Sorry... :(

Why it happened?

- Too much focused on 1.8.x, *we added many new features to 1.8 branch*
- No resources left for development of 2.0
- There is a huge difference between 1.8.0 and 1.8.8, *1082 bug fixes and new features!*
- Zabbix 1.8.8 could be easily declared 2.0 :-)
- Approach of PHP guys *“Let's add a new cool feature, break other stuff, we will fix it later”*

Current state of 1.9.x

- Zabbix 1.9.6 (beta) was released on [September 9](#)
- We plan to make further beta releases as frequent as possible

So, when Zabbix 2.0 could be released

- Stability by component
 - Zabbix Server, Proxy and Agent side is **relatively stable (RC grade)**
 - **Many known issues** on front-end side (alpha)
- **85** known blocker issues
 - Bug Tracking System: <https://support.zabbix.com>
 - Filter: 2.0 scheduled blocker issues
- We must fix all those issues before official release of 2.0

Reviewed for 2.0



ZABBIX BUGS AND ISSUES / ZBX-2361

Can't copy SNMP items from one template to another

Edit

Assign

Assign To Me

Comment

More Actions ▾

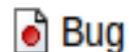
Close Issue

Need info

Workflow ▾

Details

Type:



Bug

Priority:



Blocker

Affects Version/s:

1.8.2, 1.8.3

Component/s:

GUI

Labels:

database

installation



Environment:

RHEL5.5, PHP 5.1.6, Mysql 5.0.77

Zabbix ID:

Reviewed 2.0

Status:



Confirmed

Resolution:

Unresolved

Fix Version/s:

2.0

Blocker**Fix version: 2.0****Reviewed 2.0**

Description

We are trying to copy items from Template_Netscreen_25 template to our custom Juniper template. Copying icmp items succeeds, but copying snmp items gives an error: Incorrect key format 'key_name[param1,param2,...]'.

The same happens when trying to do a full clone of a template containing snmp items. We are running zabbix 1.8.2 and the problem still exists in 1.8.3 rev. 11623.

Since we are configuring templates on multiple nodes and for many devices, inserting all items manually isn't an option. Basically deploying zabbix in our environment is heavily dependent on that functionality. That's why I set priority to Major.

Activity

New release policy

It is all about delivering **quality in time**

Problems

- Unable to guarantee just-in-time **availability of sponsored development**
- Users **cannot use new features** for years
- Difficult to generate news and business activities if releases are **rare and infrequent**

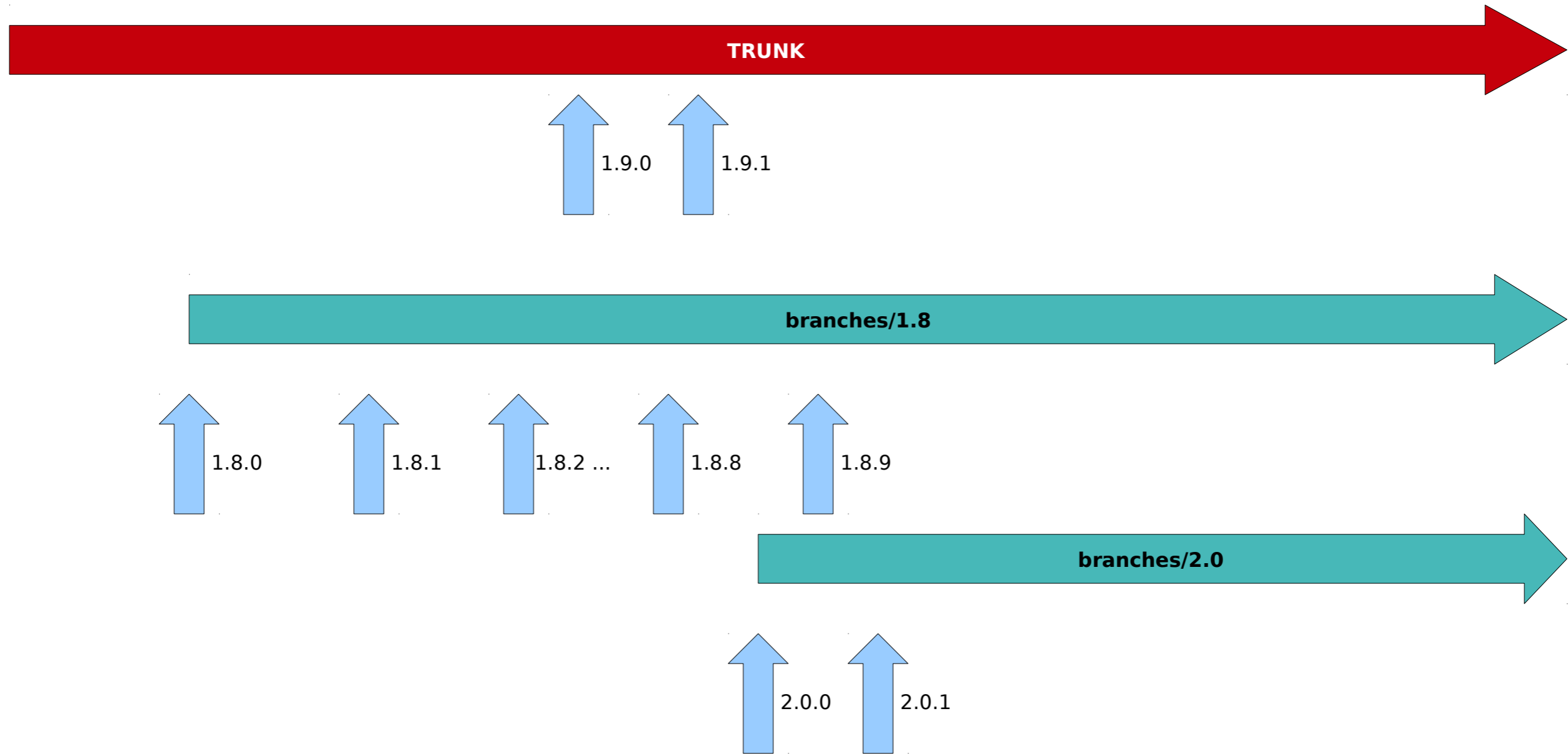
Problems continued...

- New major releases used to have many issues in the past:
 - 1.6.0, 1.8.0 – supposed to be stable
 - 1.6.7, 1.8.3 – ready for production use
- Numerous features introduced in minor versions **affected stability** and made customer upgrades more difficult
- Users and partners spend much time testing new minor releases

Versioning schema

- Major releases
 - 1.8, 2.0, 2.2 – major stable releases (even)
 - 1.7, 1.9, 2.1 – unstable (beta, alpha) releases (odd)
- Minor releases
 - 1.8.7, 1.8.8 – minor releases
- At some point unstable 1.9.x will be declared as 2.0.0

Versioning schema



Development procedure

- All code changes
 - Independently **code reviewed**
 - Independently **tested**
 - **Separate branch** created per each code change, merged only if code reviewed and tested

```
svn co svn://svn.zabbix.com/branches/dev/ZBX-1234
```

- **Regression testing**
 - Infrastructure for continuous integration is created

New Release Policy

- Release candidates (RC phase)
- String freeze phase for translators
- **Fixed release period** for major versions
 - Released **every 9 months** starting from 2.2
- Minor versions
 - **No new features**, bug fixing only
 - Minor improvements could be included (usability, etc)
 - No changes in database structure in minor releases

Zero bug policy

- All bugs (stable, trunk) are treated with the highest priority
- The **bugs are fixed ASAP** before anything else
- Eventually there will be **no open bugs**
- Trunk becomes very stable ready to be released any time with RC phase
- As a start we must fix more bugs than we generate

How can I help?

There are many ways

You are not a developer

- Make translations
- Help other people in forums, IRC, mailing lists
- Report bugs
- Do pre-release testing of RC and beta releases
- Register and vote for a feature requests
- Tell us about your experience
- Share your knowledge: conferences, events

You are a developer

- Send us your patches
- Help other people in forums, IRC, mailing lists
- Report bugs
- Do pre-release testing of RC and beta releases

Start small!

- Start with a **small patch**
- Communicate actively with us, try to understand how we work
 - **IRC, ZBX, ZBXNEXT**
- **Be patient!**
- **PROFIT!** Be hired by Zabbix eventually. :)

You are a company

We need your money!

- Purchase Annual Support (Bronze, Silver, Gold, Platinum, Enterprise)
- Sponsored development
- Get trained on-site or in Riga!
 - Zabbix Certified Specialist
 - Zabbix for Large Environments

Roadmap directions

There are many **ideas** around

General directions

- **Quality**, fully implement new development policies
- **MVC** for Zabbix GUI (modularity)
- **Usability** and **easy-to-use**, mostly about Zabbix GUI
- **Plugin architecture** for everything
- **Horizontal scalability**, HA and redundancy

WWW.ZABBIX.COM

Any questions?

We are hiring good
people! :)