

# Defect Tracking

October 2014

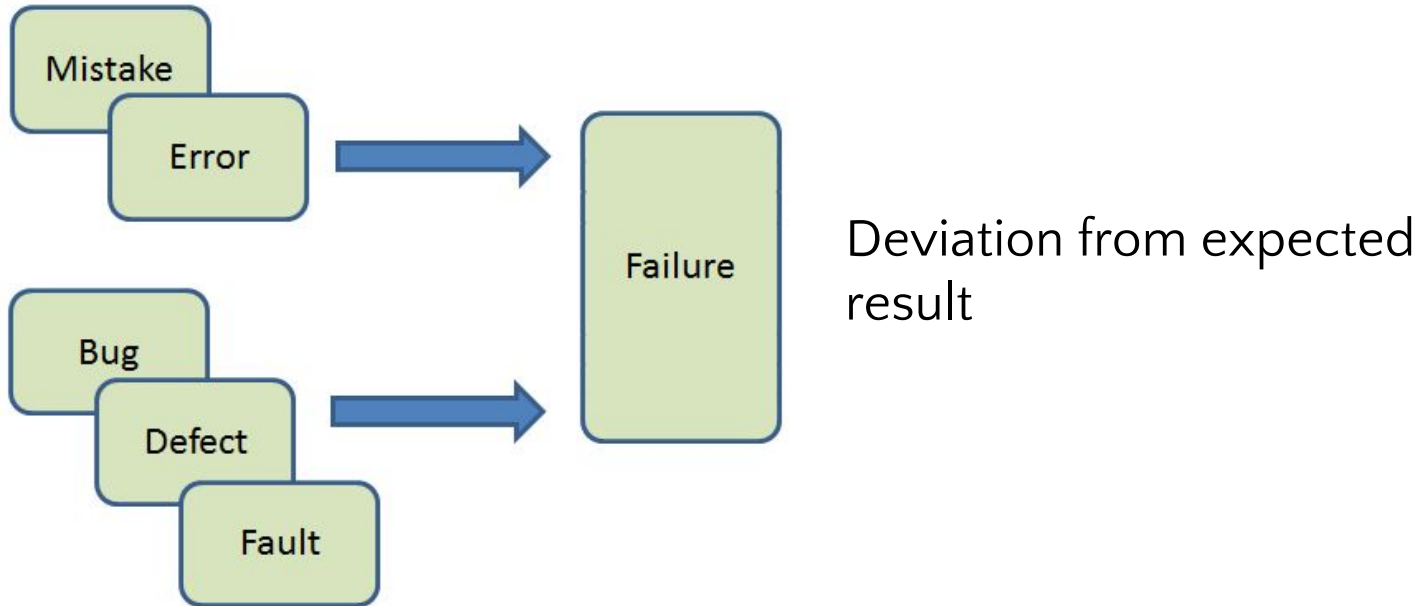
# Agenda

- *Definitions*
- *Why do we need defect reports?*
- *Defect Life Cycle*
- *Defect Report*
- *Defect Reporting Tips*
- *Defect Tracking Tools. Jira*



# Definitions

**Mistake (Error)** – human action that produces incorrect result



**Defect (Bug, Fault)** – a flaw in a component or system that can cause the component or system to fail to perform its required function

**Incident** – any event occurring that requires investigation

# Definitions

**Defect Report** – a document reporting on any flaw in a component or system that can cause the component or system to fail to perform its required function.

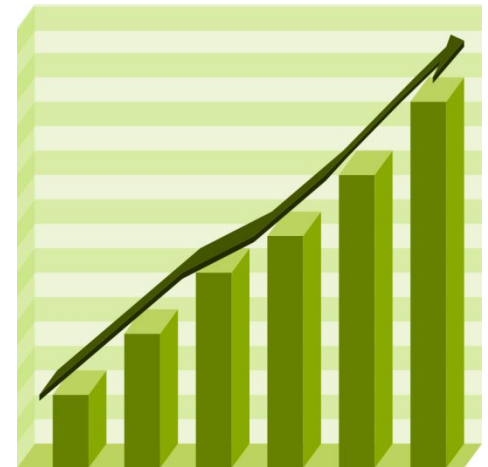
Defect is considered as **reported** if:

- ✓ it is entered into Defects Database
- ✓ it contains enough information to reproduce and analyze it

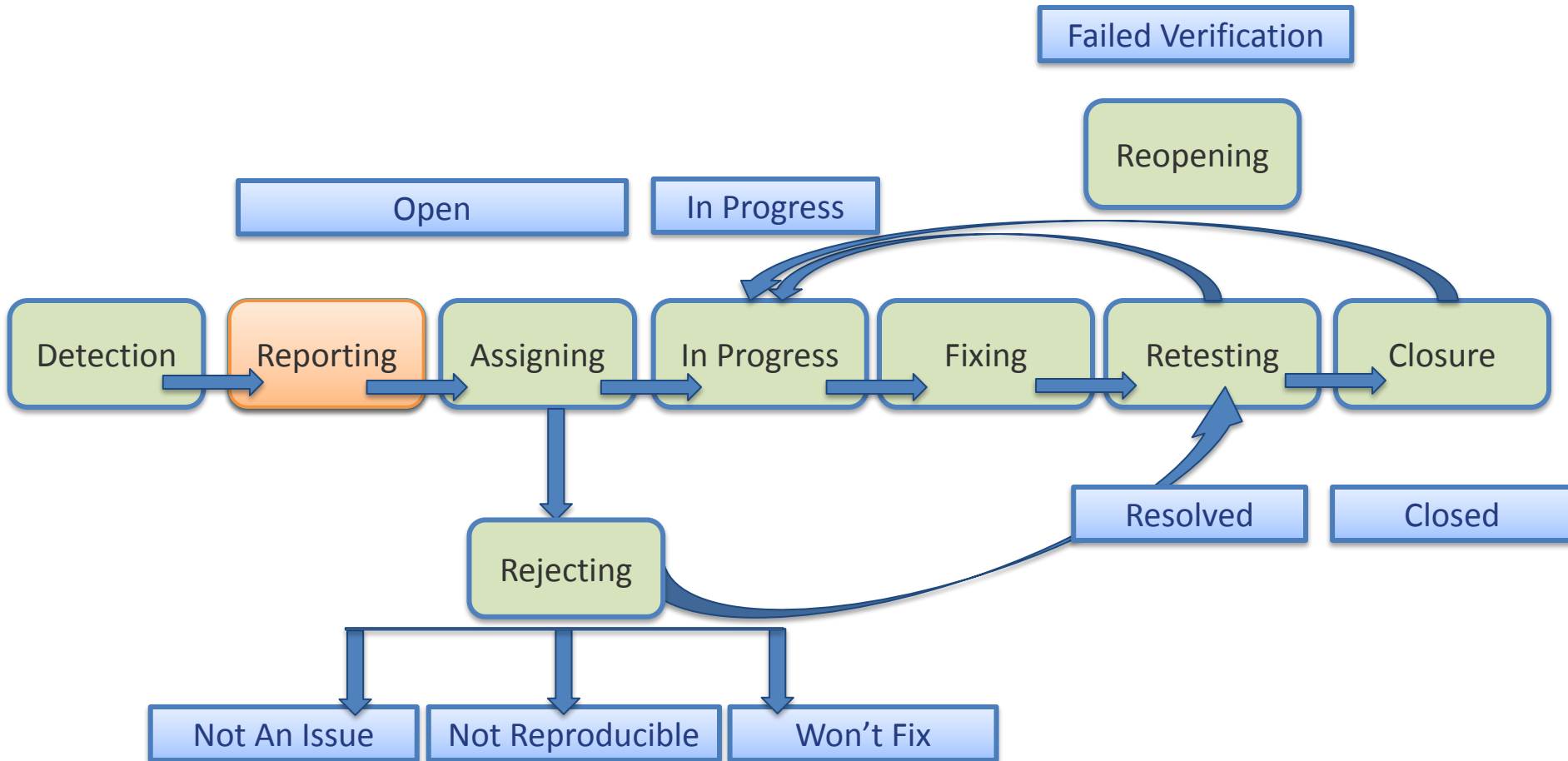


# Why do we need Defect reports?

- ✓ To provide programmers, managers and others with detailed information about the behavior observed and the defect.
- ✓ To support the analysis of trends in aggregate defect data, either for understanding more about a particular set of problems or tests or for understanding and reporting the overall level of system quality.
- ✓ Give information that can lead to development and test process improvements



# Defect Life Cycle



# Test Incident Report (Defect Report)

According to IEEE 829 Test Incident Report consists of:

- ✓ Test Incident Report identifier
- ✓ Summary
- ✓ Incident Description
  - ✓ Inputs
  - ✓ Expected Results
  - ✓ Actual Results
  - ✓ Anomalies
  - ✓ Date and Time
  - ✓ Procedure Step
  - ✓ Attempts to Repeat
  - ✓ Testers
  - ✓ Observers
- ✓ Impact
  - ✓ Severity
  - ✓ Priority

# Severity and Priority

**Severity** – the degree of impact that a defect has on the development or operation of a component or system

**Priority** – the level of business importance assigned to an item, e.g. defect

- Impact on functionality
- How serious is the bug?

- Scheduling
- How soon to fix the bug?

Severity ↑	High Severity, Low Priority <b>3</b>	High Severity, High Priority <b>1</b>
	Low Severity, Low Priority <b>4</b>	Low Severity, High Priority <b>2</b>
	Priority →	



# Defect Reporting Tips

- ✓ Try to reproduce symptoms when you see them
- ✓ Try to isolate the defect by making carefully chosen changes to the steps used to reproduce it
- ✓ Ensure that this bug is not reported yet
- ✓ Gather as many details as you can:
  - Put down Build# and Environment
  - Make a screenshot or even a video
  - Gather error logs if any
- ✓ Be clear and unambiguous. Be neutral, fact-focused and impar
- ✓ Report all defect, you have observed



# Defect Tracking Tools

**Defect Tracking Tool** – a tool that facilitates the recording and status tracking of defects and changes.

They often have workflow-oriented facilities to track and control the allocation, correction and re-testing of defects and provide reporting facilities.

Defect tracking tools used at SoftServe projects:

- Seapine TestTrack Pro
- Bugzilla
- FogBugz
- JIRA
- Mantis
- Team Foundation Server (TFS)
- and many others...



# Defect Tracking Tools

- ✓ Collect defect/request records
- ✓ Assign defect/request record to the responsible person
- ✓ Collect defect/request history
- ✓ Find defect/request by defined condition
- ✓ Filter defect/request list by defined condition
- ✓ Close defect/request record
- ✓ Additionally, export defects

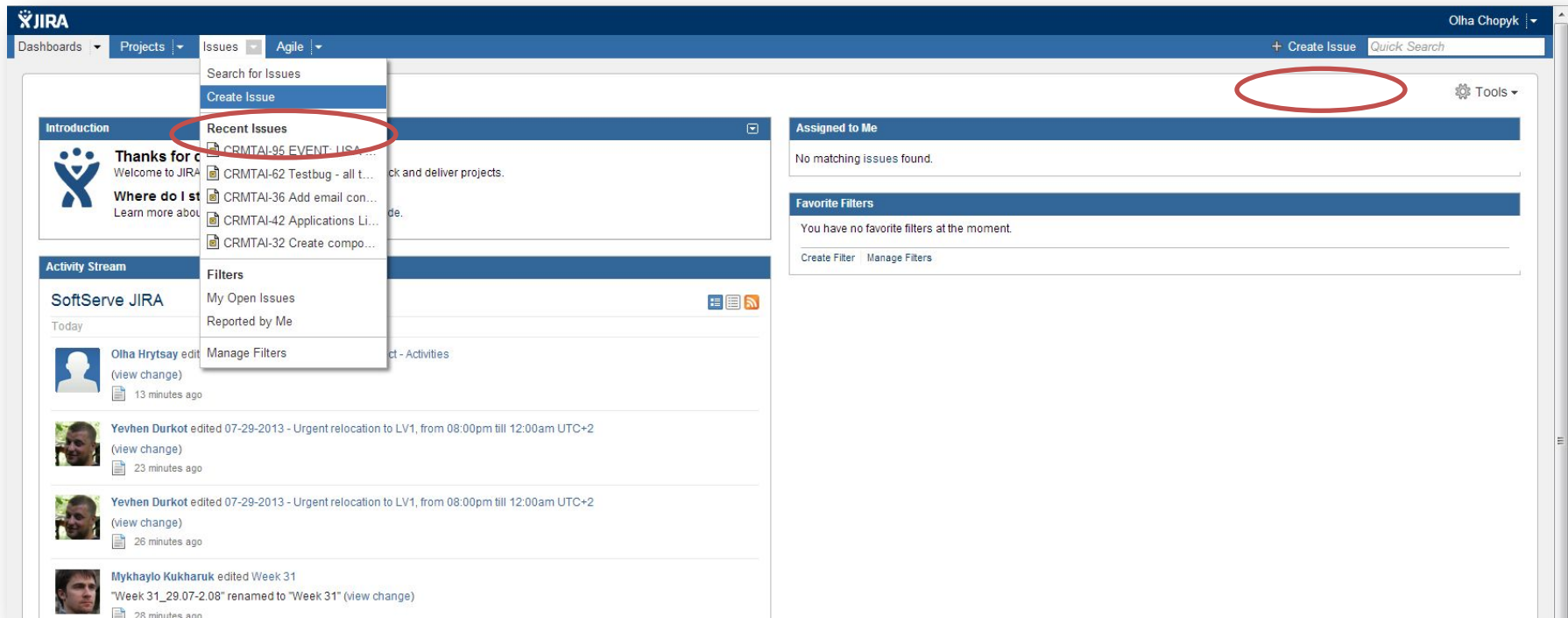


# Defect Tracking Tool



## Defect Reporting

### 1. Click Create Issue



# Defect Tracking Tool



2. Select 'Issue type' = "Bug"

3. Set short and clear Summary

A screenshot of the JIRA 'Create Issue' form. The 'Project' dropdown is set to 'SoftServe - IT Academy'. The 'Issue Type' dropdown is set to 'Bug' and is circled in red. Below it, a message states: 'Some issue types are unavailable due to incompatible field configuration and/or workflow associations.' The 'Summary' field is empty. The 'Priority' dropdown is set to 'Medium'. The 'Component/s' dropdown is open, showing 'Immediate' selected, with 'High' and 'Very Low' also visible. The 'Affects Version/s' dropdown is set to 'Low'. The 'Environment' field is empty. The 'Description' field is empty. The 'Original Estimate' field is empty, with a note: 'An estimate of how much work remains until this issue will be resolved. The format of this is \*w \*d \*h \*m\* (representing weeks, days, hours and minutes - where \* can be any number) Examples: 4d, 5h 30m, 60m and 3w.' The 'Attachment' field shows a button 'Выбрать файлы' and the text 'Файл не выбран'. The 'Epic/Theme' field is empty. The 'Documentation Link' field is empty. The 'Labels' field is empty. At the bottom right, there are buttons for 'Create another', 'Create', and 'Cancel'.

# Defect Tracking Tool



4. Select Priority\* of the defect

5. Select component, where you've found the defect, and affected version

- Originally, JIRA did have both a Priority and a Severity field. The Severity field was removed for a number of reasons [...] In order to re-implement Severity, you can create a select-list custom field

# Defect Tracking Tool



6. Put down Description, Steps, Actual and Expected results into Description field

7. Set all other fields like estimate or Documentation link

8. Attach screenshots, logs, etc.

9. Assign to appropriate person

10. Click 'Save' button

A screenshot of the JIRA 'Create Issue' form. The form is titled 'Create Issue' and has a 'Configure Fields' button in the top right corner. The form contains several fields: 'Project' (dropdown menu with 'SoftServe - IT Academy' selected), 'Issue Type' (dropdown menu with 'Bug' selected), 'Summary' (text input field), 'Priority' (dropdown menu with 'Medium' selected), 'Component/s' (dropdown menu), 'Affects Version/s' (dropdown menu), 'Environment' (text input field), 'Description' (large text area), 'Original Estimate' (text input field with a help icon), 'Attachment' (button 'Выбрать файлы' and text 'Файл не выбран'), 'Epic/Theme' (dropdown menu), 'Documentation Link' (text input field), and 'Labels' (dropdown menu). At the bottom right, there are three buttons: 'Create another', 'Create', and 'Cancel'.

# Defect Tracking Tool



## Defect filtering

1. Use configurable filter to find defect by its parameter
2. Use quick search to open exact item if you know its number

The screenshot shows the JIRA interface with the following elements:

- Navigation:** Dashboards, Projects, Issues, Agile, Create Issue, Quick Search.
- Filters:** New filter, Find filters, My Open Issues, Reported by Me, Recently Viewed, All Issues, Favorite Filters.
- Search:** Search bar with filters: Project: All, Issue Type: All, Status: All, Assignee: All, Contains text, Date Entered: All. A dropdown menu for '+ More Criteria' is open, showing options like CI Version, Comment, Completion Criteria, Created Date, Date Entered (checked), Date Entered, Description, Documentation Link, and Due Date.
- Issue List:** A table of issues with columns: Reporter, P, Status, Resolution, Created, Updated, Due. The first issue is TESTTCMA-201, reported by Andriy Novak, with status 'Open' and resolution 'Unresolved'.
- Actions:** Share and Views buttons are circled in red in the top right corner.

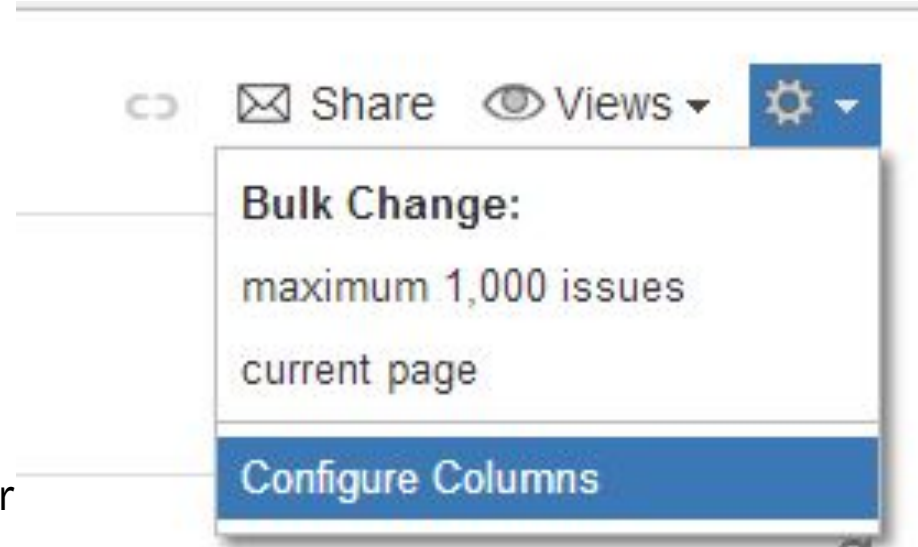


# Defect Tracking Tool



## Other features

1. Use **link** icon to get permanent link of your unsaved filter
2. Use **share** button to share filter with other team members
3. Use **bulk change** if you need to make same change for numerous defects (i.e. change release or assignments)
4. Use **views** menu to set up defect list view



All these filtering abilities are very helpful for defects analysis and statistic gathering



*Empowering your Business  
through Software Development*

# Thank you

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