

How does the Jubula Team test?

Best practices for test design, continuous integration and process

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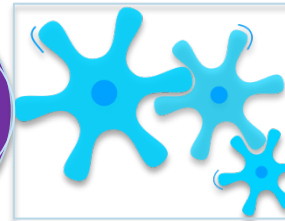
Agenda



Making your tests strong



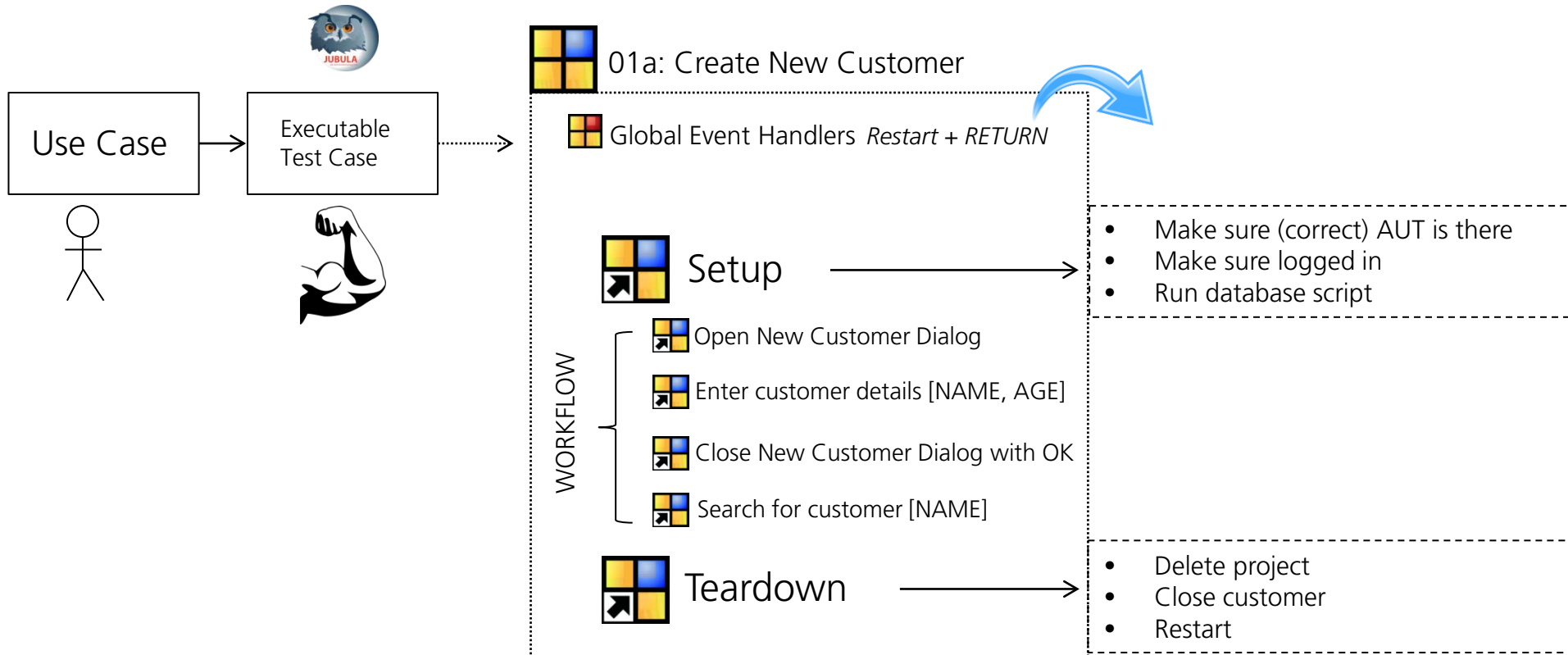
Continuous integration



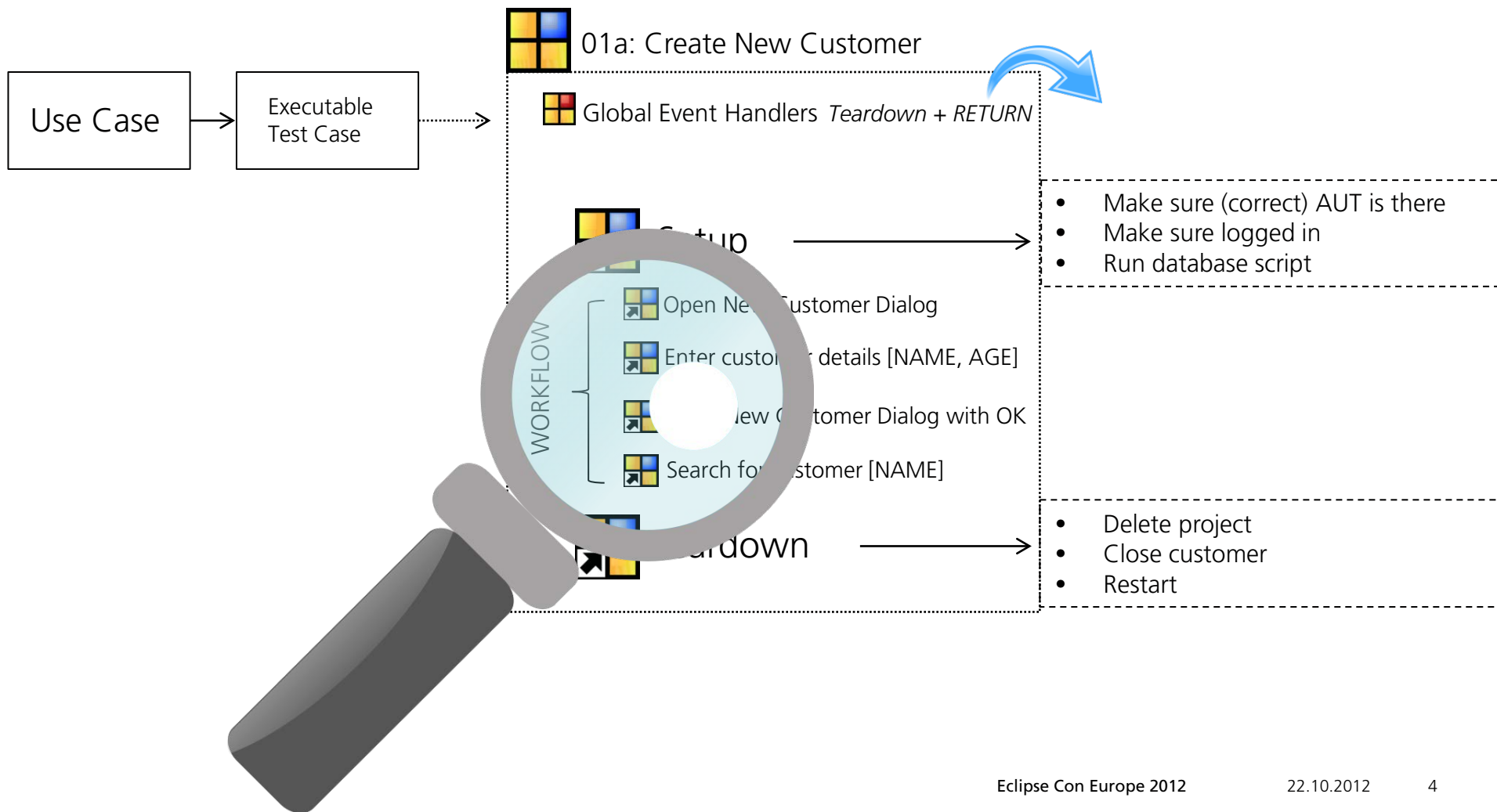
Tests in the development process



Test structure for survival at night



Test structure for survival at night



Test structure for survival through changes

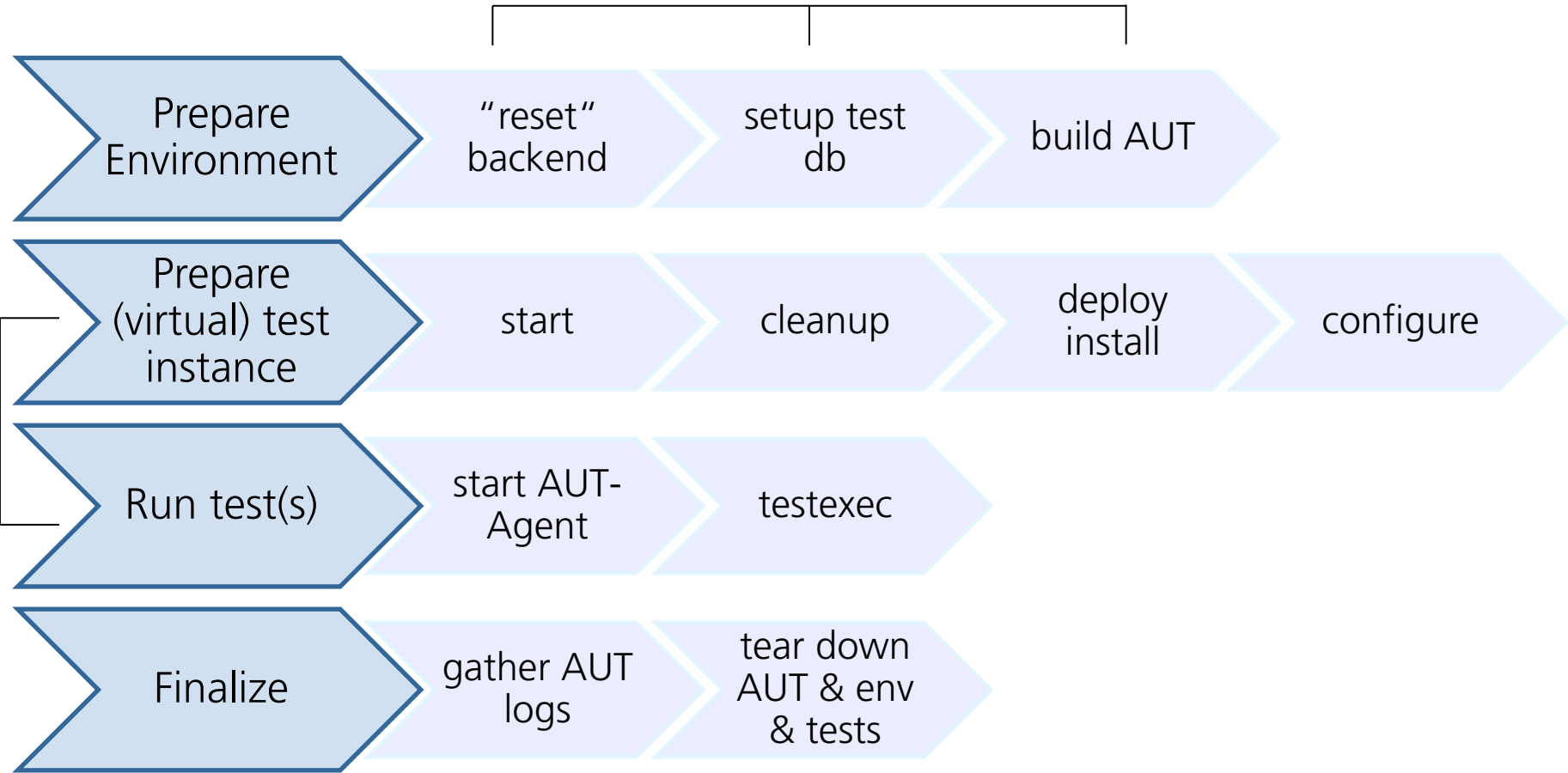


- ▶ **Need it twice?**
Modularize and reuse
- ▶ **Keep flexible**
Parametrize data /
component names
- ▶ **Use synchronization**



- ▶ **Categorize**
Test Cases
Object Mapping
Test Suites & Jobs
Central Data Sets
- ▶ **Naming**
Meaningful names
Conventions

Continuous Integration: Jobs (distributed)



Continuous integration: Setup tests



Time	Test	Result	Duration	Message
10:00:00	Test 1	Success	0:01:00	
10:00:01	Test 2	Failure	0:00:30	AssertionError
10:00:02	Test 3	Success	0:00:45	
10:00:03	Test 4	Success	0:00:20	
10:00:04	Test 5	Failure	0:00:15	NullPointerException
10:00:05	Test 6	Success	0:00:10	
10:00:06	Test 7	Success	0:00:05	
10:00:07	Test 8	Success	0:00:05	
10:00:08	Test 9	Success	0:00:05	
10:00:09	Test 10	Success	0:00:05	
10:00:10	Test 11	Success	0:00:05	
10:00:11	Test 12	Success	0:00:05	
10:00:12	Test 13	Success	0:00:05	
10:00:13	Test 14	Success	0:00:05	
10:00:14	Test 15	Success	0:00:05	
10:00:15	Test 16	Success	0:00:05	
10:00:16	Test 17	Success	0:00:05	
10:00:17	Test 18	Success	0:00:05	
10:00:18	Test 19	Success	0:00:05	
10:00:19	Test 20	Success	0:00:05	

dbtool:
-deleteall
-keepsummary

1

testexec:
-project
-autconfig
-testsuite



3



testexec:
writes results

2 **dbtool:**
-import

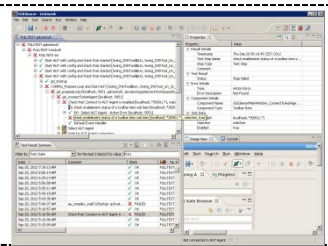


0

manual export (xml)



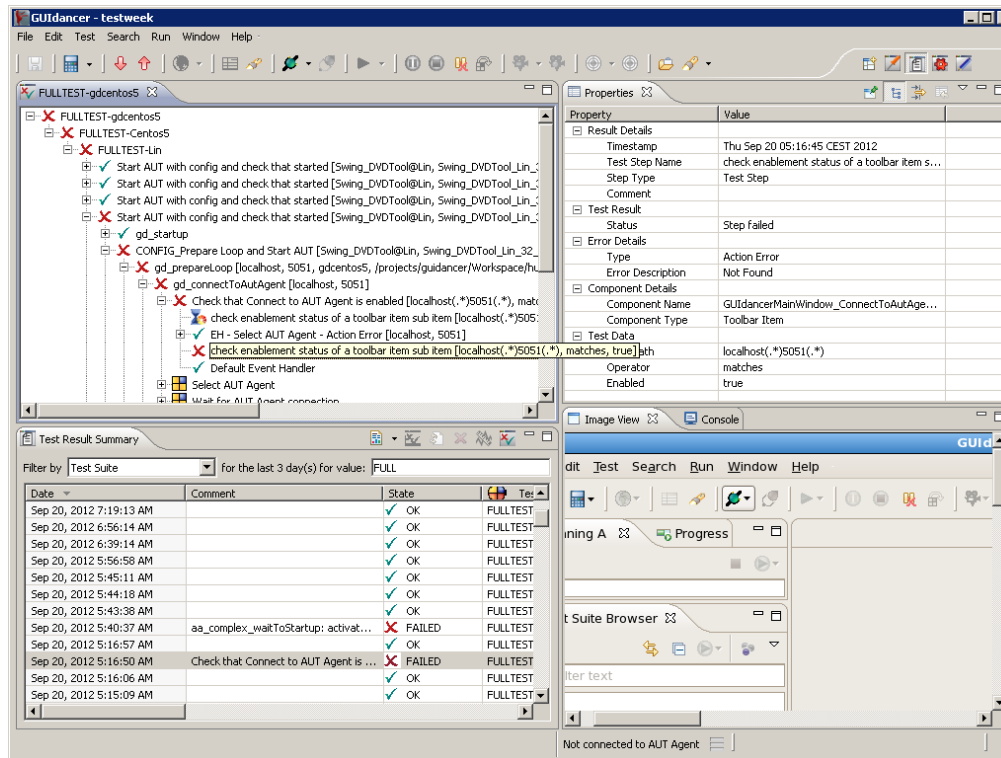
4 **ITE:**
analyse results



Process: Daily activities

Windows 7

1



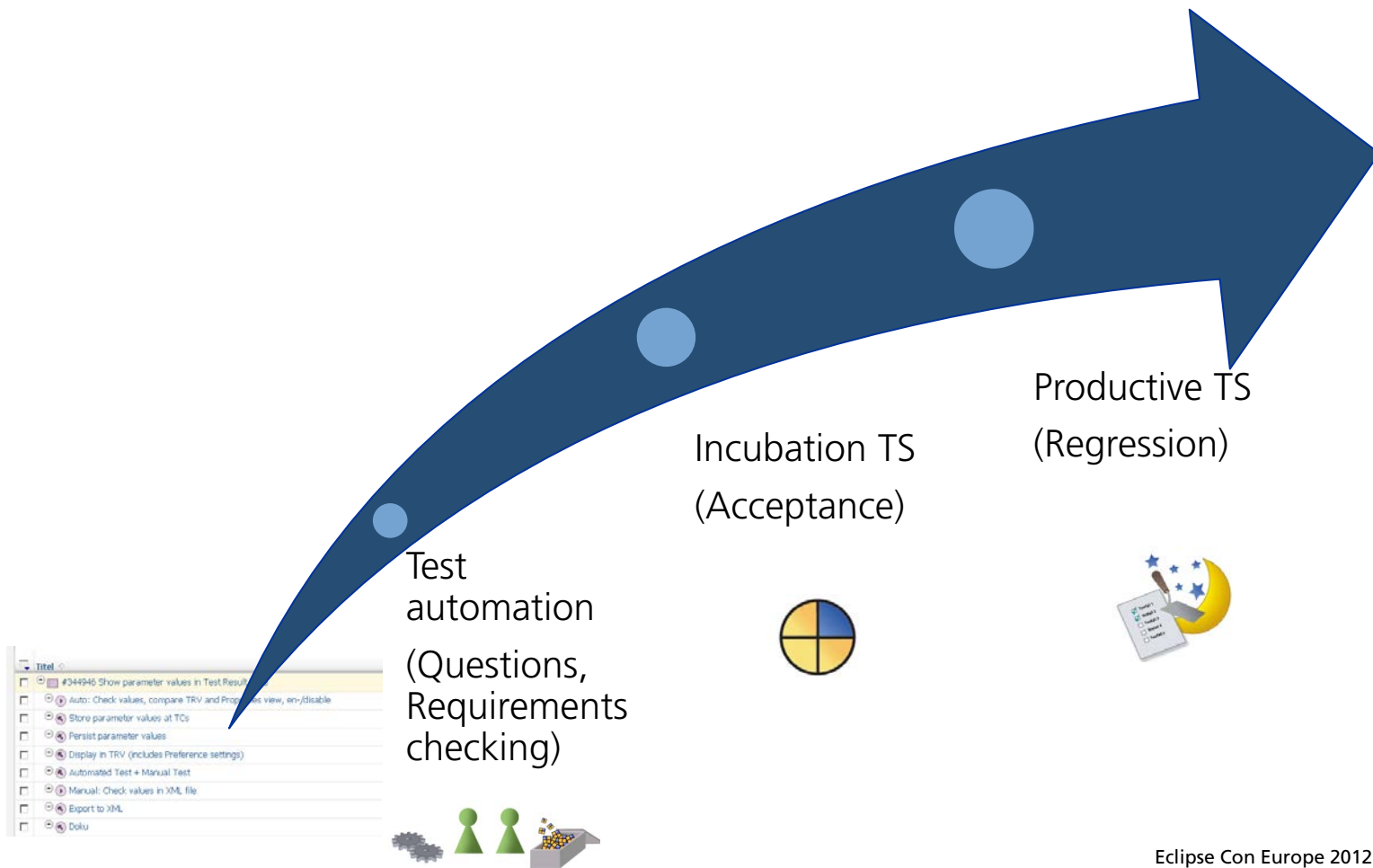
The screenshot displays the Eclipse IDE's Test Runner. The left pane shows a test suite tree for 'FULLTEST-gdcentos5'. The right pane shows the 'Properties' view for a failed test step. The bottom pane shows the 'Test Result Summary' table with columns for Date, Comment, State, and Test Suite.

2

3

Test Suite	AUT OS	Duration	%	COMMENT TITLE
FULLTEST-Win	Windows Vista	05:18:15	99.94%	Swing - Button - Select Context Menu Entry by Textpath (Specify Position): Action Error - Not found; though the context menu is visible on screenshot
FULLTEST-Win	Windows Vista	01:59:37	0.02%	aa_complex_waitToStartup: activate AUT: test hang up for 1:59:33h and ran into timeout
FULLTEST-gdcentos5	Linux	00:06:59	39.64%	Check that Connect to AUT Agent is enabled: check for toolbaritem "localhost 5051" failed - after EH (editing preferences) failed again

Process: Tests in the development process



Process: Prioritizing bugs

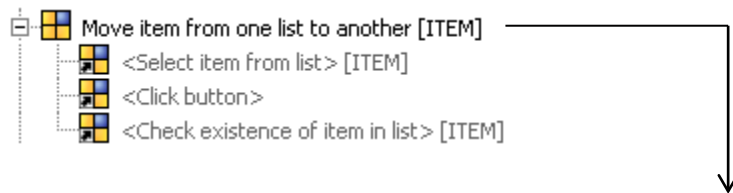
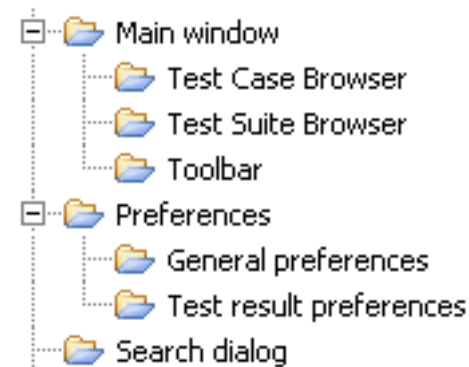
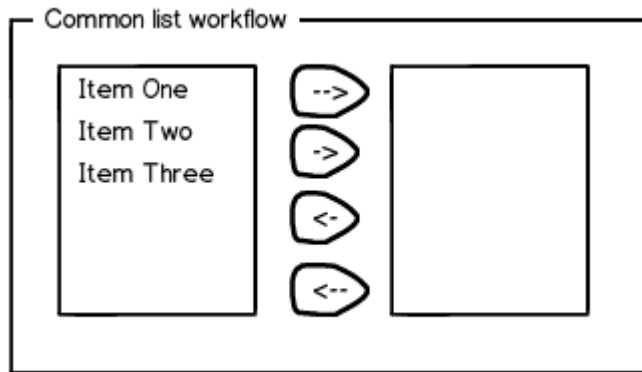
Type of error	Effect	Action
Regression	PRODUCTIVE test fails	Fix immediately - P1
Acceptance	Manual or automated (INCUBATION) acceptance test fails. Feedback from demonstration	Fix as a part of the development activity (P2)
Known errors or newly discovered	Error found in release or in development build	Prioritize and plan for upcoming development task (P2 – P5)
Blocker in released version	Data loss, function loss	Fix and release patch (P1)

Summary



Appendix

Test structure: examples



Data parametrized:
Item to move

Component names parametrized:
LIST_TO_MOVE_FROM
BUTTON_TO_CLICK
LIST_TO_MOVE_TO

= any group of this type, any direction, any button

Continuous Integration: Single machine

Continuous integration: Jobs (1)

▶ Prepare environment

Reset backend

Second / third tiers – database, application server

Setup test db

Use DBTool to delete projects (keep summaries) and import latest version

Build AUT

As single deployable artefact (installer, zip file) → this is also beneficial for manual testing and releasing!

Continuous integration: Jobs (2)

▶ Prepare (virtual) test instance

Start

- (Auto) login

- “Enslave” machine

Cleanup

- Remove old software and data

- Done here and not at end to ensure that it is executed

Deploy / install

- e.g. headless mode for install4J with prefilled config file

Configure

- AUT – RCP Accessor, Licenses, Preferences

- System – disable firewalls, auto update and screen saver