



What the heck happened?

QA Tools – Squish & Test Center
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Booth 21

STAREAST, Orlando, Wednesday, 27 April 2022

Agenda

1 Introduction

2 Live Demo

3 QA Tools

4 Wrap-up

5 Q&A



Introduction



All your tests have
run successfully...



...and suddenly one
test is failing...

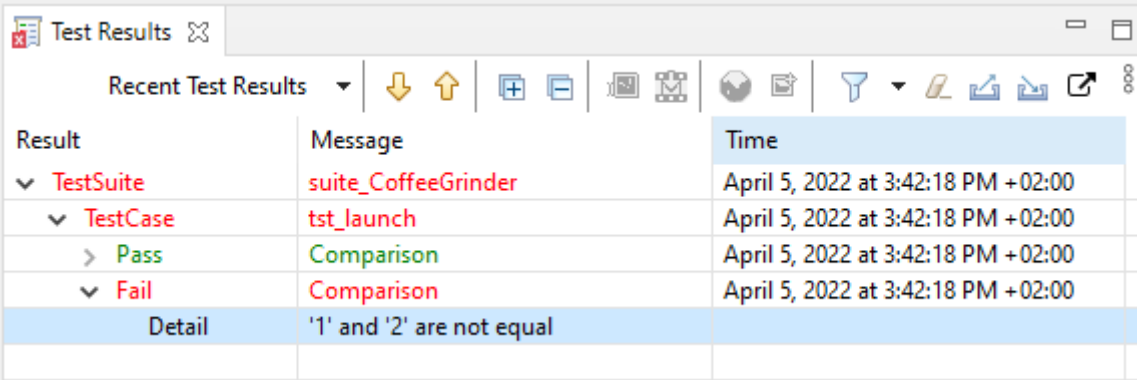


...what the heck
happened?

Approaching failed tests

- › Verification message(s)

Approaching failed tests



The screenshot shows the 'Test Results' window in Qt. It features a toolbar with icons for navigating between test results, including arrows, a search icon, and a refresh icon. The main area is a table with three columns: 'Result', 'Message', and 'Time'. The table shows a hierarchy of test results: 'TestSuite' (suite_CoffeeGrinder), 'TestCase' (tst_launch), and a 'Fail' result for a 'Comparison' test. The 'Detail' row shows the specific failure message: ''1' and '2' are not equal'.

Result	Message	Time
▼ TestSuite	suite_CoffeeGrinder	April 5, 2022 at 3:42:18 PM +02:00
▼ TestCase	tst_launch	April 5, 2022 at 3:42:18 PM +02:00
> Pass	Comparison	April 5, 2022 at 3:42:18 PM +02:00
▼ Fail	Comparison	April 5, 2022 at 3:42:18 PM +02:00
Detail	'1' and '2' are not equal	

Approaching failed tests

The screenshot shows the Jenkins web interface. The top navigation bar includes the Jenkins logo, a search bar, and the user 'Judy Smith' with a 'log out' button. The breadcrumb trail is: Dashboard > squish > tests > new-feature-tests > #20 > Test Results.

On the left sidebar, the 'Test Result' menu item is selected. Other options include History, Git Build Data, Open Blue Ocean, Replay, Pipeline Steps, Workspaces, Previous Build, and Next Build.

The main content area is titled 'Test Result' and shows '2 failures (+1)'. A progress bar indicates '2,085 tests (±0)' and 'Took 5 min 55 sec.' with an 'Add description' link.

Below this is the 'All Failed Tests' section, which contains a table with columns 'Test Name', 'Duration', and 'Age'. One failed test is listed:

Test Name	Duration	Age
suite_water_supply Error Details XML Report does not match expected file Stack Trace <pre> --- /home/demo/jenkins-slave/workspace/new-feature/s/tests/cfx334/launch/suite_water_supply.expected.xml2.5.xml +++ /home/demo/jenkins-slave/workspace/new-feature/s/tests/cfx334/launch/suite_water_supply_xml25/results.xml @@ -35,23 +35,14 @@ + <message type="ERROR"> - <visualVerificationResult type="FAIL"> - <objectLocation> - <uri><![CDATA[x-testcase:/verificationPoints/VisualVPWithPropertyFail]]></uri> - <objectName><![CDATA[:Water Status]]></objectName> - </objectLocation> - </visualVerificationResult> - </verification> </pre>	245 ms	1

Approaching failed tests

- › Verification message(s)
- › Logs and output of stdout/stderr

Approaching failed tests

✕

▼ Check out from version control

7m 18s

```

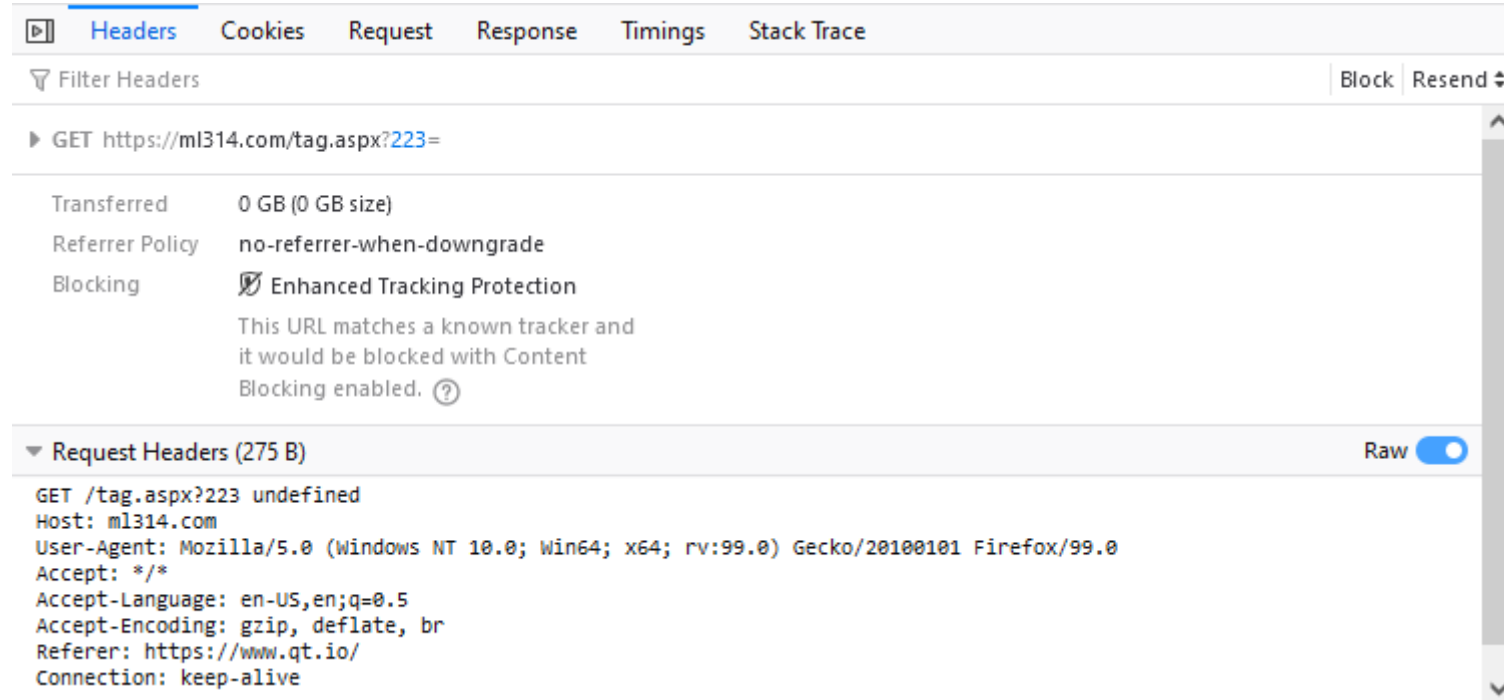
35 [2022-04-20T15:03:43.623Z] fatal: protocol error: bad pack header
36 [2022-04-20T15:03:43.623Z]
37 [2022-04-20T15:03:43.623Z] at org.jenkinsci.plugins.gitclient.CliGitAPIImpl.launchCommandIn(CliGitAPIImpl.java:2671)
38 [2022-04-20T15:03:43.624Z] at org.jenkinsci.plugins.gitclient.CliGitAPIImpl.launchCommandWithCredentials(CliGitAPIImpl.java:2096)
39 [2022-04-20T15:03:43.624Z] at org.jenkinsci.plugins.gitclient.CliGitAPIImpl.access$500(CliGitAPIImpl.java:84)
40 [2022-04-20T15:03:43.624Z] at org.jenkinsci.plugins.gitclient.CliGitAPIImpl$1.execute(CliGitAPIImpl.java:618)
41 [2022-04-20T15:03:43.624Z] at
42 [2022-04-20T15:03:43.624Z] org.jenkinsci.plugins.gitclient.RemoteGitImpl$CommandInvocationHandler$GitCommandMasterToSlaveCallable.call(RemoteGitImpl.java:158)
43 [2022-04-20T15:03:43.624Z] at
44 [2022-04-20T15:03:43.624Z] org.jenkinsci.plugins.gitclient.RemoteGitImpl$CommandInvocationHandler$GitCommandMasterToSlaveCallable.call(RemoteGitImpl.java:151)
45 [2022-04-20T15:03:43.624Z] at hudson.remoting.UserRequest.perform(UserRequest.java:211)
46 [2022-04-20T15:03:43.624Z] at hudson.remoting.UserRequest.perform(UserRequest.java:54)
47 [2022-04-20T15:03:43.624Z] at hudson.remoting.Request$2.run(Request.java:376)
48 [2022-04-20T15:03:43.624Z] at hudson.remoting.InterceptingExecutorService.lambda$wrap$0(InterceptingExecutorService.java:78)
49 [2022-04-20T15:03:43.624Z] at java.util.concurrent.FutureTask.run(FutureTask.java:264)
50 [2022-04-20T15:03:43.624Z] at java.util.concurrent.ThreadPoolExecutor.runWorker(ThreadPoolExecutor.java:1128)
51 [2022-04-20T15:03:43.624Z] at java.util.concurrent.ThreadPoolExecutor$Worker.run(ThreadPoolExecutor.java:628)
52 [2022-04-20T15:03:43.624Z] at java.lang.Thread.run(Thread.java:834)
53 [2022-04-20T15:03:43.624Z] Suppressed: hudson.remoting.Channel$CallSiteStackTrace: Remote call to dock11
54 [2022-04-20T15:03:43.624Z] at hudson.remoting.Channel.attachCallSiteStackTrace(Channel.java:1784)
55 [2022-04-20T15:03:43.624Z] at hudson.remoting.UserRequest$ExceptionResponse.retrieve(UserRequest.java:356)
56 [2022-04-20T15:03:43.624Z] at hudson.remoting.Channel.call(Channel.java:1000)
57 [2022-04-20T15:03:43.624Z] at org.jenkinsci.plugins.gitclient.RemoteGitImpl$CommandInvocationHandler.execute(RemoteGitImpl.java:143)
58 [2022-04-20T15:03:43.624Z] at sun.reflect.GeneratedMethodAccessor529.invoke(Unknown Source)
59 [2022-04-20T15:03:43.624Z] at sun.reflect.DelegatingMethodAccessorImpl.invoke(DelegatingMethodAccessorImpl.java:43)
60 [2022-04-20T15:03:43.624Z] at java.lang.reflect.Method.invoke(Method.java:498)
61 [2022-04-20T15:03:43.624Z] at org.jenkinsci.plugins.gitclient.RemoteGitImpl$CommandInvocationHandler.invoke(RemoteGitImpl.java:129)
62 [2022-04-20T15:03:43.624Z] at com.sun.proxy.$Proxy95.execute(Unknown Source)
63 [2022-04-20T15:03:43.624Z] at hudson.plugins.git.GitSCM.fetchFrom(GitSCM.java:999)
64 [2022-04-20T15:03:43.624Z] at hudson.plugins.git.GitSCM.retrieveChanges(GitSCM.java:1242)
65 [2022-04-20T15:03:43.624Z] at hudson.plugins.git.GitSCM.checkout(GitSCM.java:1302)
66 [2022-04-20T15:03:43.624Z] at org.jenkinsci.plugins.workflow.steps.scm.SCMStep.checkout(SCMStep.java:129)
67 [2022-04-20T15:03:43.624Z] at org.jenkinsci.plugins.workflow.steps.scm.SCMStep$StepExecutionImpl.run(SCMStep.java:97)
68 [2022-04-20T15:03:43.624Z] at org.jenkinsci.plugins.workflow.steps.scm.SCMStep$StepExecutionImpl.run(SCMStep.java:84)
69 [2022-04-20T15:03:43.625Z] at
70 [2022-04-20T15:03:43.625Z] org.jenkinsci.plugins.workflow.steps.SynchronousNonBlockingStepExecution.lambda$start$0(SynchronousNonBlockingStepExecution.java:47)
71 [2022-04-20T15:03:43.625Z] at java.util.concurrent.Executors$RunnableAdapter.call(Executors.java:511)
72 [2022-04-20T15:03:43.625Z] at java.util.concurrent.FutureTask.run(FutureTask.java:266)
73 [2022-04-20T15:03:43.625Z] at java.util.concurrent.ThreadPoolExecutor.runWorker(ThreadPoolExecutor.java:1149)
74 [2022-04-20T15:03:43.625Z] at java.util.concurrent.ThreadPoolExecutor$Worker.run(ThreadPoolExecutor.java:624)
75 [2022-04-20T15:03:43.625Z] at java.lang.Thread.run(Thread.java:748)
76 Error fetching remote repo 'origin'

```


Approaching failed tests

- › Verification message(s)
- › Logs and output of stdout/stderr
- › Call stacks, requests and responses

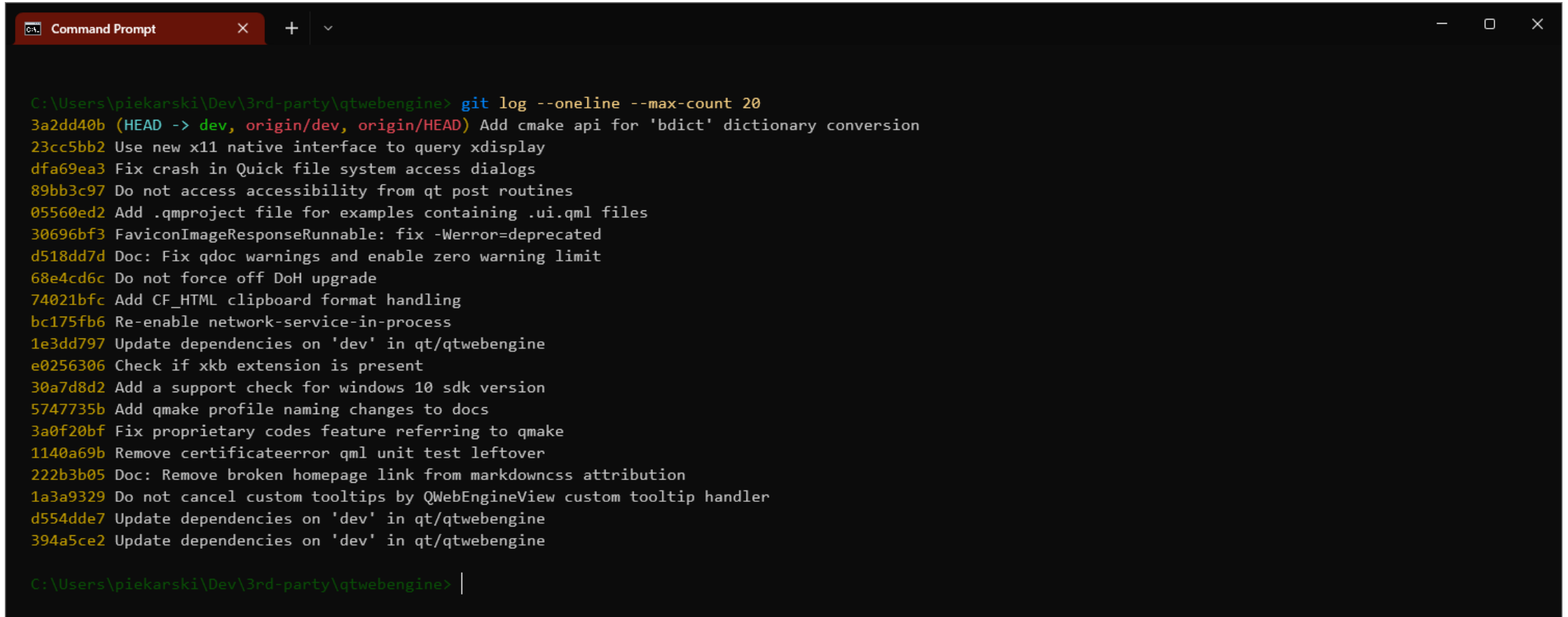
Approaching failed tests



Approaching failed tests

- › Verification message(s)
- › Logs and output of stdout/stderr
- › Call stacks, requests and responses
- › Version Control History

Approaching failed tests



```
C:\Users\piekarski\Dev\3rd-party\qtwebengine> git log --oneline --max-count 20
3a2dd40b (HEAD -> dev, origin/dev, origin/HEAD) Add cmake api for 'bdict' dictionary conversion
23cc5bb2 Use new x11 native interface to query xdisplay
dfa69ea3 Fix crash in Quick file system access dialogs
89bb3c97 Do not access accessibility from qt post routines
05560ed2 Add .qmpproject file for examples containing .ui.qml files
30696bf3 FavIconImageResponseRunnable: fix -Werror=deprecated
d518dd7d Doc: Fix qdoc warnings and enable zero warning limit
68e4cd6c Do not force off DoH upgrade
74021bfc Add CF_HTML clipboard format handling
bc175fb6 Re-enable network-service-in-process
1e3dd797 Update dependencies on 'dev' in qt/qtwebengine
e0256306 Check if xkb extension is present
30a7d8d2 Add a support check for windows 10 sdk version
5747735b Add qmake profile naming changes to docs
3a0f20bf Fix proprietary codes feature referring to qmake
1140a69b Remove certificateerror qml unit test leftover
222b3b05 Doc: Remove broken homepage link from markdowncss attribution
1a3a9329 Do not cancel custom tooltips by QWebEngineView custom tooltip handler
d554dde7 Update dependencies on 'dev' in qt/qtwebengine
394a5ce2 Update dependencies on 'dev' in qt/qtwebengine

C:\Users\piekarski\Dev\3rd-party\qtwebengine> |
```

Approaching failed tests

The screenshot shows a Windows Command Prompt window with a dark background. The title bar reads "Command Prompt". The command prompt shows the following sequence of commands and output:

```
C:\Users\piekarski\Dev\3rd-party\qtwebengine> git log --oneline --max-count 20
3a2dd40b (HEAD -> dev, origin/dev, origin/HEAD) Add cmake api for 'bdict' dictionary conversion
23cc5bb2 Use new x11 native interface
dfa69ea3 Fix crash in Quick file system
89bb3c97 Do not access accessibility
05560ed2 Add .qmpproject file for example
30696bf3 FavIconImageResponseRunnable
d518dd7d Doc: Fix qdoc warnings and errors
68e4cd6c Do not force off DoH upgrade
74021bfc Add CF_HTML clipboard format
bc175fb6 Re-enable network-service-in
1e3dd797 Update dependencies on 'dev'
e0256306 Check if xkb extension is present
30a7d8d2 Add a support check for windows
5747735b Add qmake profile naming character
3a0f20bf Fix proprietary codes feature
1140a69b Remove certificateerror.qml
222b3b05 Doc: Remove broken homepage
1a3a9329 Do not cancel custom tooltip
d554dde7 Update dependencies on 'dev'
394a5ce2 Update dependencies on 'dev'
```

Then, the user runs `git show` on the commit `23cc5bb2`. A second Command Prompt window titled "Command Prompt - git show" opens, displaying the commit details:

```
commit 23cc5bb2588100c6053d9d11b20778724cddb6e7
Author: Michal Klocek <michal.klocek@qt.io>
Date: Thu Oct 14 15:26:16 2021 +0200

    Use new x11 native interface to query xdisplay

    The call to nativeResourceForScreen can return egl native display
    handle if called with "display", since it gets mapped to XLibDisplay
    but egl device integration can return EGLDisplay.
    This is not the case for nativeResourceForIntegration.

    Use new native QX11Application interface to query for display,
    note there is not need to use nativeResourceForScreen for "display"
    anyway since qt does not support multiple x connections to different
    displays.

    This fixes places where code queries "display" and bails out
    if it is null.

    Fixes: QTBUG-97472
    Pick-to: 6.2 6.2.2
    Change-Id: Ibc5f8f96e612389bfa24a81268202c9e47a7580b
    Reviewed-by: Qt CI Bot <qt_ci_bot@qt-project.org>
```

The first Command Prompt window shows the command prompt again:

```
C:\Users\piekarski\Dev\3rd-party\qtwebengine> |
```

C:\Users\piekarski\Dev\3rd-party\qtwebengine> git log --oneline --max-count 20

3a2dd40b (HEAD -> dev, origin/dev, origin/HEAD) Add cmake api for 'bdict' dictionary conversion
23cc5bb2 Use new x11 native interface
dfa69ea3 Fix crash in Quick file system
89bb3c97 Do not access accessibility
05560ed2 Add .qmpproject file for example
30696bf3 FaviconImageResponseRunnable
d518dd7d Doc: Fix qdoc warnings and errors
68e4cd6c Do not force off DoH upgrade
74021bfc Add CF_HTML clipboard format
bc175fb6 Re-enable network-service-in
1e3dd797 Update dependencies on 'dev'
e0256306 Check if xcb extension is present
30a7d8d2 Add a support check for windows
5747735b Add qmake profile naming character
3a0f20bf Fix proprietary codes feature
1140a69b Remove certificateerror.qml
222b3b05 Doc: Remove broken homepage link
1a3a9329 Do not cancel custom tooltips
d554dde7 Update dependencies on 'dev'
394a5ce2 Update dependencies on 'dev'

Command Prompt - git show X + v

commit 23cc5bb2588100c6053d9d11b20778724cdbd6e7
Author: Michal Klocek <michal.klocek@qt.io>
Date: Thu Oct 14 15:26:16 2021 +0200

Use new x11 native interface to query xdisplay

The call to native handle if called but egl device is not available This is not the case

Use new native QXcb note there is not anyway since qt displays.

This fixes places if it is null.

Fixes: QTBUG-9747
Pick-to: 6.2 6.2.1
Change-Id: Ibc5f8
Reviewed-by: Qt C

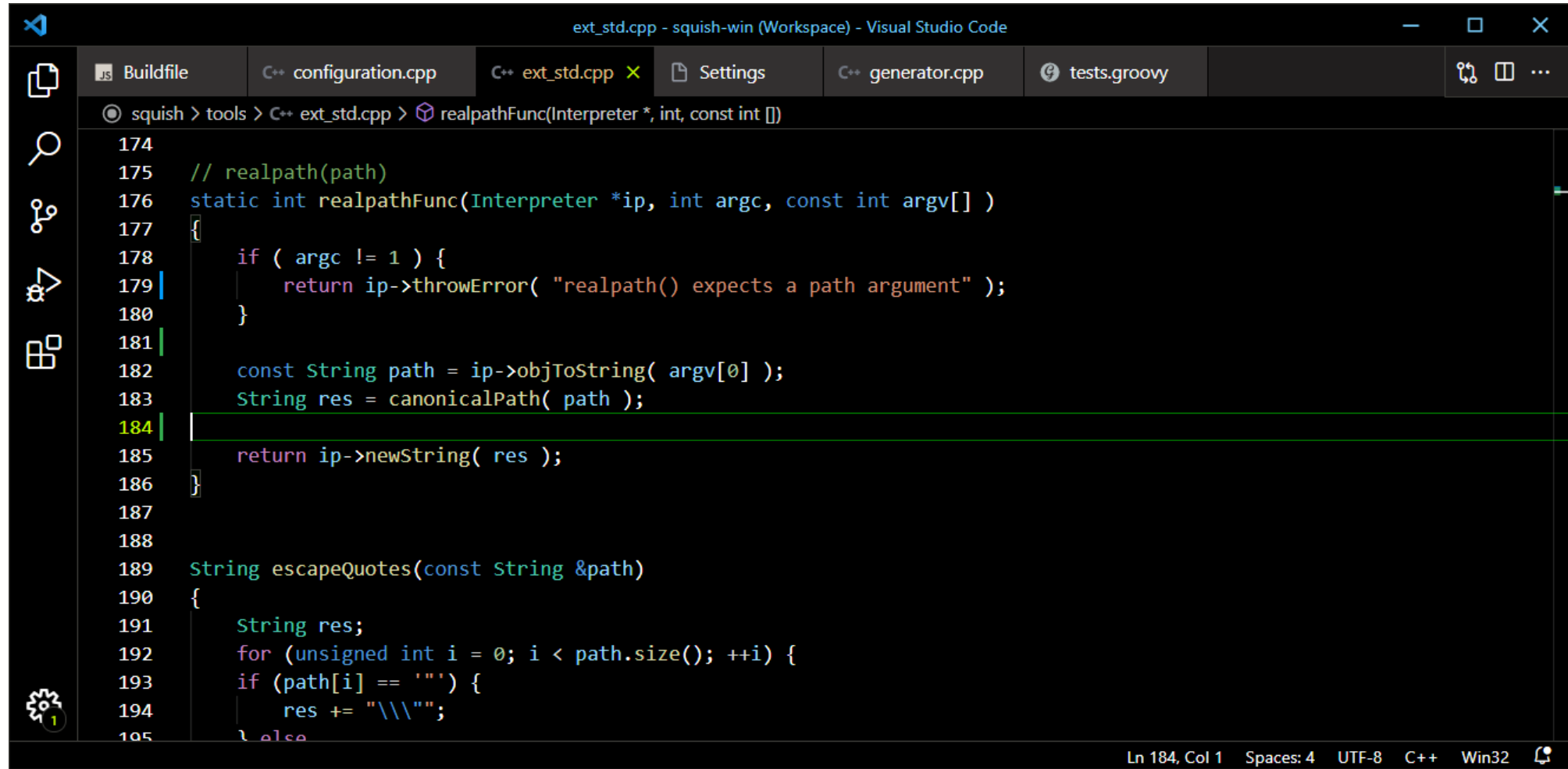
Command Prompt - git diff 2: X + v

```
-if(QT_GENERATOR_IS_MULTI_CONFIG)  
-    set(spellcheckerDir ${CMAKE_CURRENT_BINARY_DIR}/dict/qtwebengine_dictionaries)  
-else()  
-    set(spellcheckerDir ${CMAKE_CURRENT_BINARY_DIR}/qtwebengine_dictionaries)  
-endif()  
-  
-# note setting QT_WEBENGINE_ICU_DATA below is not required if this example  
-# is not compiled as part of qtwebengine module build  
-  
-foreach(dictFile ${dicts})  
-    get_filename_component(dictName ${dictFile} NAME_WE)  
-    add_custom_command(TARGET spellchecker  
-        PRE_BUILD  
-        COMMAND ${CMAKE_COMMAND} -E make_directory ${spellcheckerDir}  
-        COMMAND ${CMAKE_COMMAND} -E env  
-            "${TARGET_FILE}:${QT_CMAKE_EXPORT_NAMESPACES}::qwengine_convert_dict"  
-            "${CMAKE_CURRENT_SOURCE_DIR}/dict/${dictFile}" ${spellcheckerDir}/${dictName}.bdic  
-            COMMENT "Running qwengine_convert_dict"  
+    qt_add_webengine_dictionary(  
+        TARGET spellchecker  
+        SOURCE "${dictFile}"  
+        OUTPUT_DIRECTORY ${CMAKE_CURRENT_BINARY_DIR}
```

Approaching failed tests

- › Verification message(s)
- › Logs and output of stdout/stderr
- › Call stacks, requests and responses
- › Version Control History
- › **Scattering print statements**

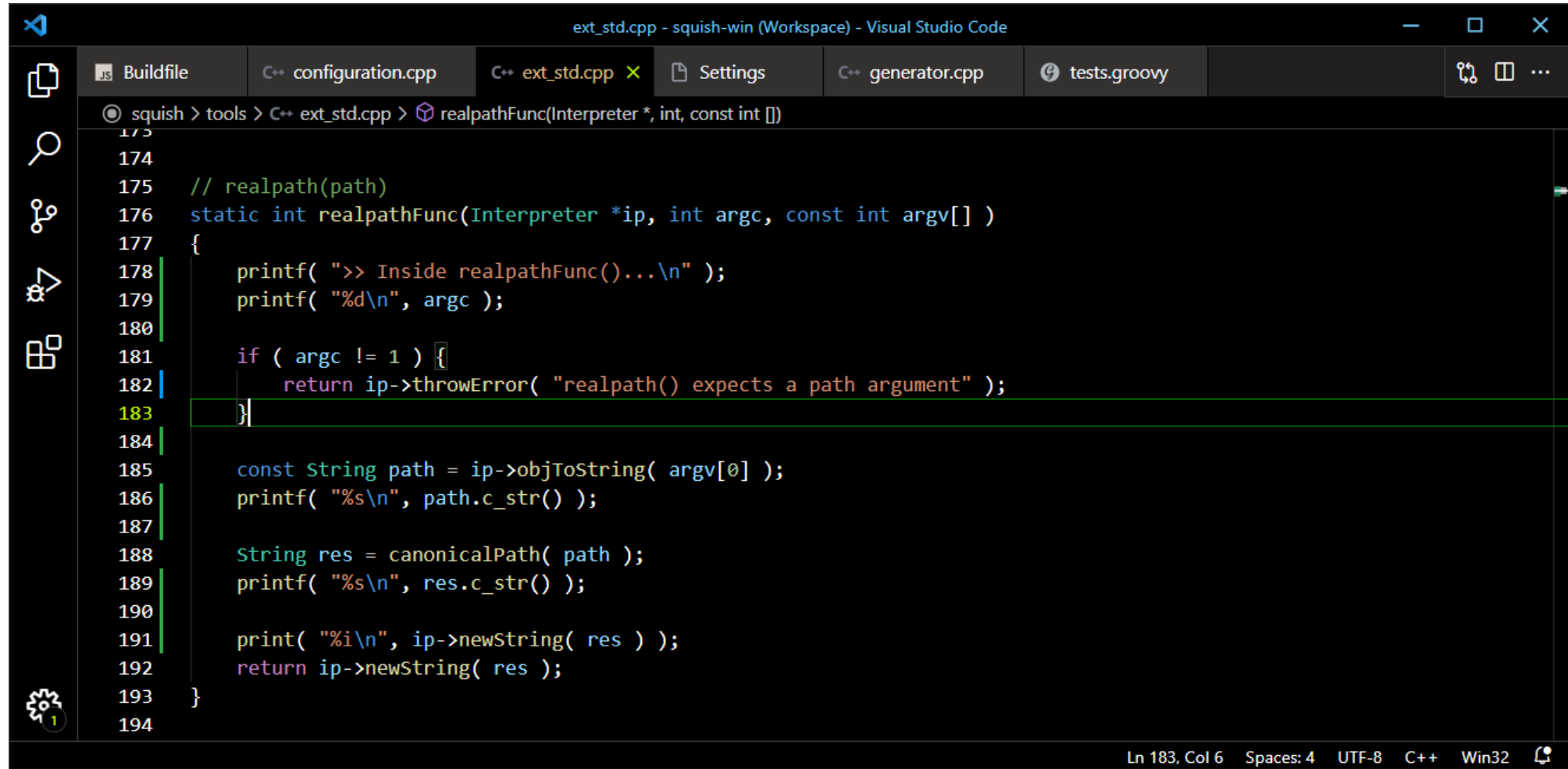
Approaching failed tests



```
ext_std.cpp - squish-win (Workspace) - Visual Studio Code
Buildfile  C++ configuration.cpp  C++ ext_std.cpp X  Settings  C++ generator.cpp  tests.groovy
squish > tools > C++ ext_std.cpp > realpathFunc(Interpreter *, int, const int [])
174
175 // realpath(path)
176 static int realpathFunc(Interpreter *ip, int argc, const int argv[] )
177 {
178     if ( argc != 1 ) {
179         return ip->throwError( "realpath() expects a path argument" );
180     }
181
182     const String path = ip->objToString( argv[0] );
183     String res = canonicalPath( path );
184     return ip->newString( res );
185 }
186
187
188
189 String escapeQuotes(const String &path)
190 {
191     String res;
192     for (unsigned int i = 0; i < path.size(); ++i) {
193         if (path[i] == '"') {
194             res += "\\\"";
195         } else
```

Ln 184, Col 1 Spaces: 4 UTF-8 C++ Win32

Approaching failed tests



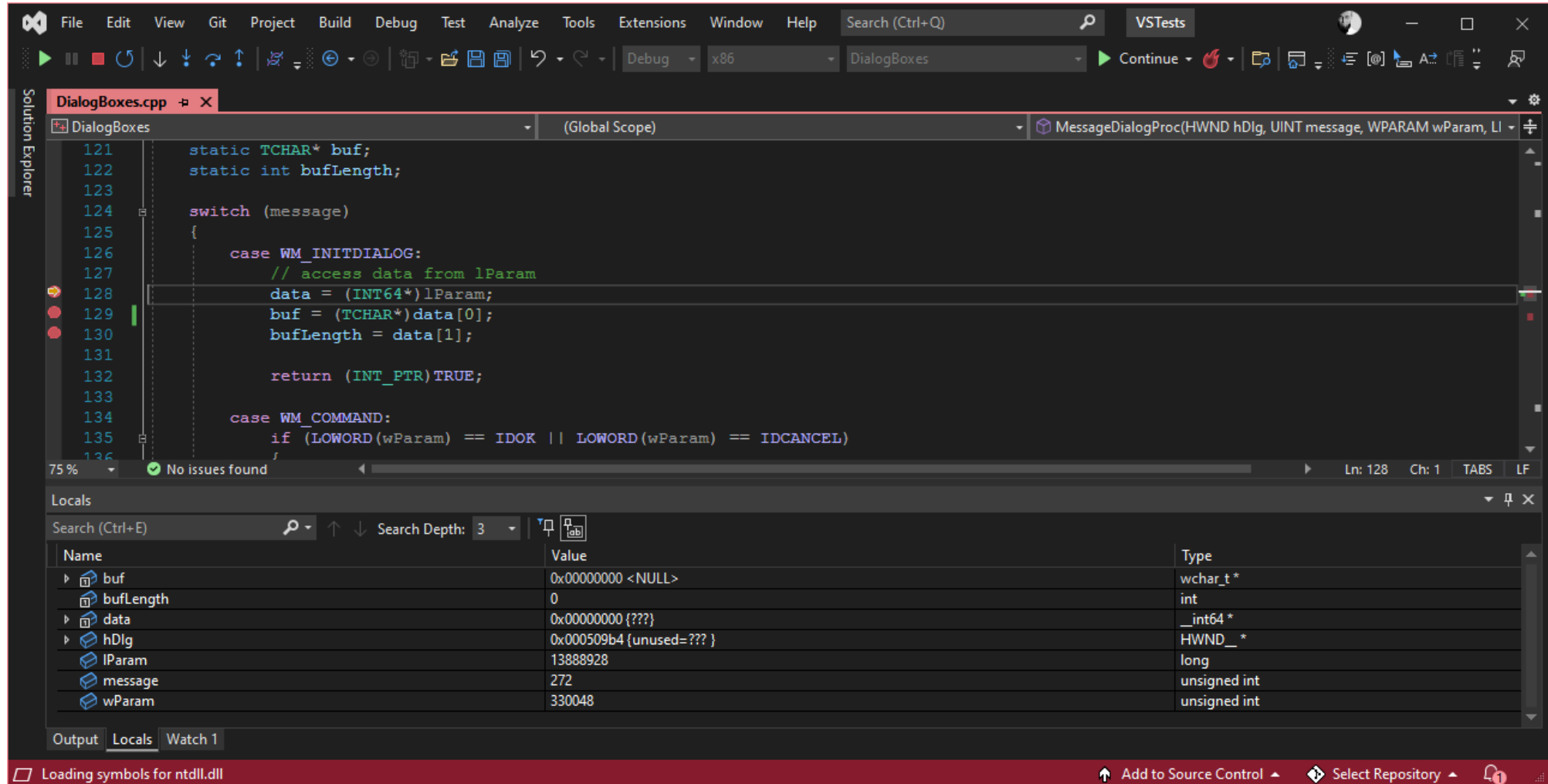
```
ext_std.cpp - squish-win (Workspace) - Visual Studio Code
JS Buildfile  C++ configuration.cpp  C++ ext_std.cpp X  Settings  C++ generator.cpp  tests.groovy
squish > tools > C++ ext_std.cpp > realpathFunc(Interpreter *, int, const int [])
173
174
175 // realpath(path)
176 static int realpathFunc(Interpreter *ip, int argc, const int argv[] )
177 {
178     printf( ">> Inside realpathFunc()...\n" );
179     printf( "%d\n", argc );
180
181     if ( argc != 1 ) {
182         return ip->throwError( "realpath() expects a path argument" );
183     }
184
185     const String path = ip->objToString( argv[0] );
186     printf( "%s\n", path.c_str() );
187
188     String res = canonicalPath( path );
189     printf( "%s\n", res.c_str() );
190
191     print( "%i\n", ip->newString( res ) );
192     return ip->newString( res );
193 }
194
```

Ln 183, Col 6 Spaces: 4 UTF-8 C++ Win32

Approaching failed tests

- › Verification message(s)
- › Logs and output of stdout/stderr
- › Call stacks, requests and responses
- › Version Control History
- › Scattering print statements
- › Stepping with a debugger

Approaching failed tests



Approaching failed tests

Qt Creator interface showing the QML file `ApplicationFlow.qml` at line 67, column 44. The code defines the `ApplicationFlowForm` and its state transitions. The debugger is stopped at line 67, which is the `onCoffeeSelected` function. The variables window shows the `this` object with various properties and their values.

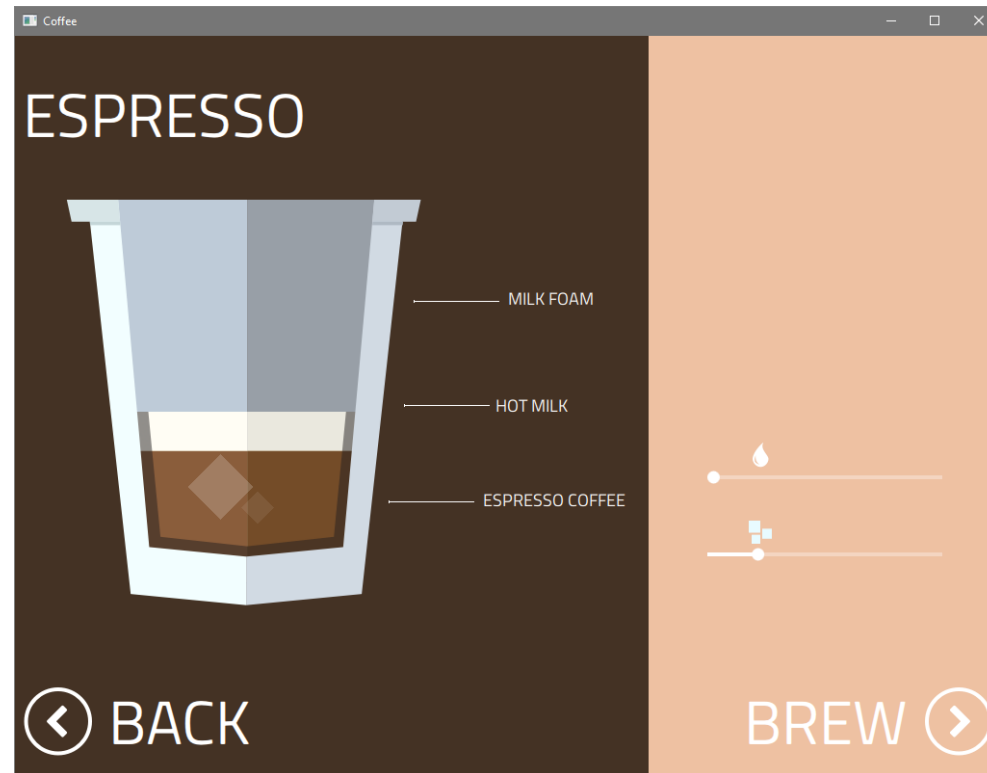
Name	Value	Type
<code>this</code>		object
<code>activeFocus</code>	<code>false</code>	boolean
<code>activeFocusChanged</code>	<code>activeFocusChanged</code>	function
<code>activeFocusOnTab</code>	<code>false</code>	boolean
<code>activeFocusOnTabChanged</code>	<code>activeFocusOnTabChanged</code>	function
<code>anchors</code>		object
<code>animationDuration</code>	<code>400</code>	number
<code>animationDurationChanged</code>	<code>animationDurationChanged</code>	function
<code>antialiasing</code>	<code>false</code>	boolean
<code>antialiasingChanged</code>	<code>antialiasingChanged</code>	function
<code>baseline</code>		object
<code>baselineOffset</code>	<code>0</code>	number
<code>baselineOffsetChanged</code>	<code>baselineOffsetChanged</code>	function
<code>border</code>		object
<code>bottom</code>		object
<code>brewing</code>		object
<code>brewingChanged</code>	<code>brewingChanged</code>	function
<code>childAt</code>	<code>childAt</code>	function
<code>children</code>		object
<code>childrenChanged</code>	<code>childrenChanged</code>	function

Level	Function	File	Line	Address	Number	Function File	Line	Address	Condition	Ignore
1	<code>onCoffeeSelected</code>	<code>ApplicationFlow.qml</code>	66		1	<code>...cted ...cationFlow.qml</code>	67			
2	<code>onClicked</code>	<code>SideBar.qml</code>	85							
3	<code>onClicked</code>	<code>CoffeeButton.qml</code>	65							

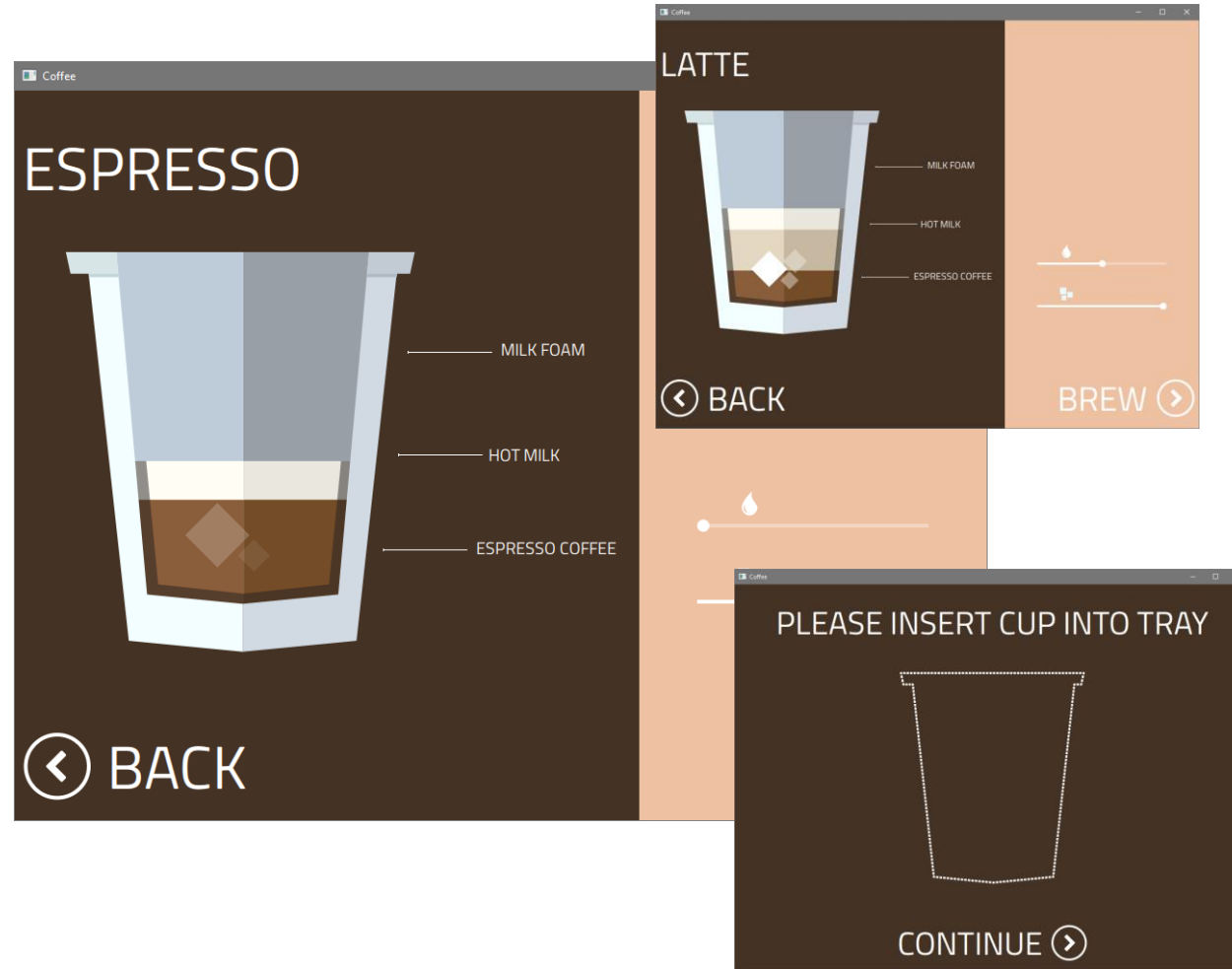
Approaching failed tests

- › Verification message(s)
- › Logs and output of stdout/stderr
- › Call stacks, requests and responses
- › Version Control History
- › Scattering print statements
- › Stepping with a debugger
- › Screenshots

Approaching failed tests



Approaching failed tests



Approaching failed tests



Approaching failed tests

- › Verification message(s)
- › Logs and output of stdout/stderr
- › Call stacks, requests and responses
- › Version Control History
- › Scattering print statements
- › Stepping with a debugger
- › Screenshots
- › **Google...**

Approaching failed tests

- › Verification message(s)
 - › Logs and output of stdout/stderr
 - › Call stacks, requests and responses
 - › Version Control History
 - › Scattering print statements
 - › Stepping with a debugger
 - › Screenshots
 - › Google...
-
- › ...and of course, your colleague next door!



Is this enough to
pinpoint a failure?

**‘A picture is worth
a thousand words.’**

Approaching failed tests

Video captured during test runs

```
ListModel {  
  id: cupList  
  ListElement {  
    name: "doppio"  
    image: "qrc:doppio.png"  
  }  
  
  states: [  
    State {  
      name: "start"  
    },  
    State {  
      name: "wait"  
    },  
    State {  
      name: "ready"  
    }  
  ]  
}
```



2

Live Demo – Testing a Coffee Machine

Test Suites

suite_py

Test Cases

tst_general

tst_adding

tst_adding_data

tst_addLoggingWrapper

tst_clickButton_wrapper

Test Case Resources

Scripts

Test Data

VPs

Gestures

test.py

Test Suite Resources

Scripts

Test Data

VPs

Gestures

pycache

names.py

wrapsquishfunction.py

Video Player (suite_py/tst_general)

Control Bar

Stop Recording

Verify

Insert

Pause

Remote Control

Cancel

Running Test Case tst_general

Comparison: 'Doe' and 'Smith' are not equal

Address Book - MyAddresses.adr

File

Edit

Forename

Surname

Email

Phone

1

Jane

Doe

jane.doe@nowhere.com

123 555 1212

2

Aaiyasha

Cheatham

aaiya.cheatha@shearer.net

543 709 9479

3

Abdul-Wahhab

Dickie

abdu.dickie@grissom.com

591 326 1378

4

Aditya

Doe

ad.crisp@beadsworth.net

565 741 2692

5

Ahmet

Boardus

a.board@oldenburg.com

538 161 3394

6

Aillie

Lant

ailli.lant@harkins.net

579 102 6482

7

Alanah

Dewa

8

Alea

Coop

9

Amy

Mcmi

10

Aron

Griev

11

Aston

Rob

12

Awais

Rohr

13

Bairah

Caca

Removed Adora Hay

00:00:31/00:00:36

tst_general (suite_py)

26

test.compare(table.rowCount, 126)

27

doubleClick(waitForObjectItem(names.address_Book_MyAddresses_adr_File_QTableWidget,

28

type(waitForObject(names.file_LineEdit), "Doe")

29

type(waitForObject(names.file_LineEdit), "<Return>")

30

mouseClick(waitForObjectItem(names.address_Book_MyAddresses_adr_File_QTableWidget,

31

clickButton(waitForObject(names.address_Book_MyAddresses_adr_Remove_QToolButton))

32

clickButton(waitForObject(names.address_Book_Yes_QPushButton))

33

test.compare(waitForObjectExists(names.file_0_0_QLineEdit), "Doe")

34

test.compare(waitForObjectExists(names.file_0_0_QLineEdit), "Doe")

35

test.compare(waitForObjectExists(names.file_0_0_QLineEdit), "Doe")

Test Results

Recent Test Results

Result

Message

TestSuite

suite_py

TestCase

tst_general

Video Capture Start

Video Attachment for AUT: addressbook...

Pass

Comparison

Detail

'125' and '125' are equal

Pass

Comparison

Detail

'126' and '126' are equal

Pass

Comparison

Detail

'125' and '125' are equal

Fail

Comparison

Detail

'Doe' and 'Smith' are not equal

Pass

Comparison

Detail

'125' and '125' are equal

Pass

Comparison

Detail

'125' and '125' are equal

Explore - Squish Test Center for

+

https://eimsbuettel.froglogic.com/testcenter/explore?page=1&tab=sunburst&ty

90%

☆

|||

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☰

Squish Test Center

tests

History

Explore

Manual Testing

Jira

John Smith

?

jenkins-new-feature-tests-9

Batch

Failures

Table

Sunburst

Code Coverage

Arguments with singlequotes

Test Case

QA Tools



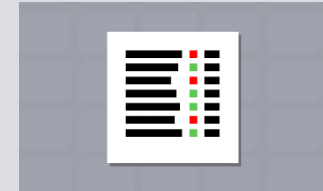
Squish

Multi-platform, object-aware
automated GUI testing for
virtually any toolkit



Coco

Cross-platform, cross-compiler
advanced **code coverage analysis** &
Tool Qualification



Test Center

Centralized **test result management**
platform connecting automation with
the entire dev process

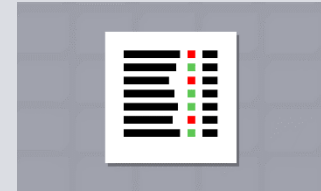
QA Tools



Squish



Coco



Test Center

The image displays the Squish GUI Tester interface, showing a video player, test results, and test suite resources.

Test Suites

- suite_py
 - tst_general
 - tst_adding
 - tst_adding_data
 - tst_addLoggingWrapper
 - tst_clickButton_wrapper

Test Case Resources

- Scripts
 - test.py

Test Suite Resources

- Scripts
 - _pycache_
 - names.py
 - wrapsquishfunction.py

Video Player (suite_py/tst_general)

The video player shows a screenshot of the **Address Book - MyAddresses.adr** application. The application displays a table of addresses:

	Forename	Surname	Email	Phone
1	Jane	Doe	jane.doe@nowhere.com	123 555 1212
2	Aaiyasha	Cheatham	aaiya.cheatha@shearer.net	543 709 9479
3	Abdul-Wahhab	Dickie	abdu.dickie@grissom.com	591 326 1378
4	Aditya	Doe	ad.crisp@beadsworth.net	565 741 2692
5	Ahmet	Boardus	a.board@oldenburg.com	538 161 3394
6	Aillie	Lant	ailli.lant@harkins.net	579 102 6482
7	Alanah	Dewar	a.dewar@handfield.eu	555 137 3609
8	Alea	Cooper	alea.cooper@breedlove.net	529 792 9823
9	Amy	Mcmillan	amy.mcmillan@robb.eu	588 226 5176
10	Aron	Grieve	ar.grieve@mulkey.eu	573 879 8988
11	Aston	Rob	aston.rob@uren.net	527 859 2438
12	Awais	Rohrbach	aw.rohrbach@bowser.com	550 500 3059
13	Bairah	Care	bair.care@nimmo.net	608 331 0730
	Removed Adora Hay			

Control Bar

Stop Recording Verify Insert Pause Remote Control Cancel

Running Test Case tst_general

Comparison: 'Doe' and 'Smith' are not equal

Test Results

Recent Test Results

Result	Message
TestSuite	suite_py
Test Case	tst_general
Video Capture Start	Video Attachment for AUT: addressbook...
Pass	Comparison
Detail	'125' and '125' are equal
Pass	Comparison
Detail	'126' and '126' are equal
Pass	Comparison
Fail	Comparison
Detail	'Doe' and 'Smith' are not equal
Pass	Comparison
Pass	Comparison
Pass	Comparison
Detail	'125' and '125' are equal
Video Capture End	Video Capture Stopped

Global Scripts

Squish Test Center

Project

Test Suite Resources

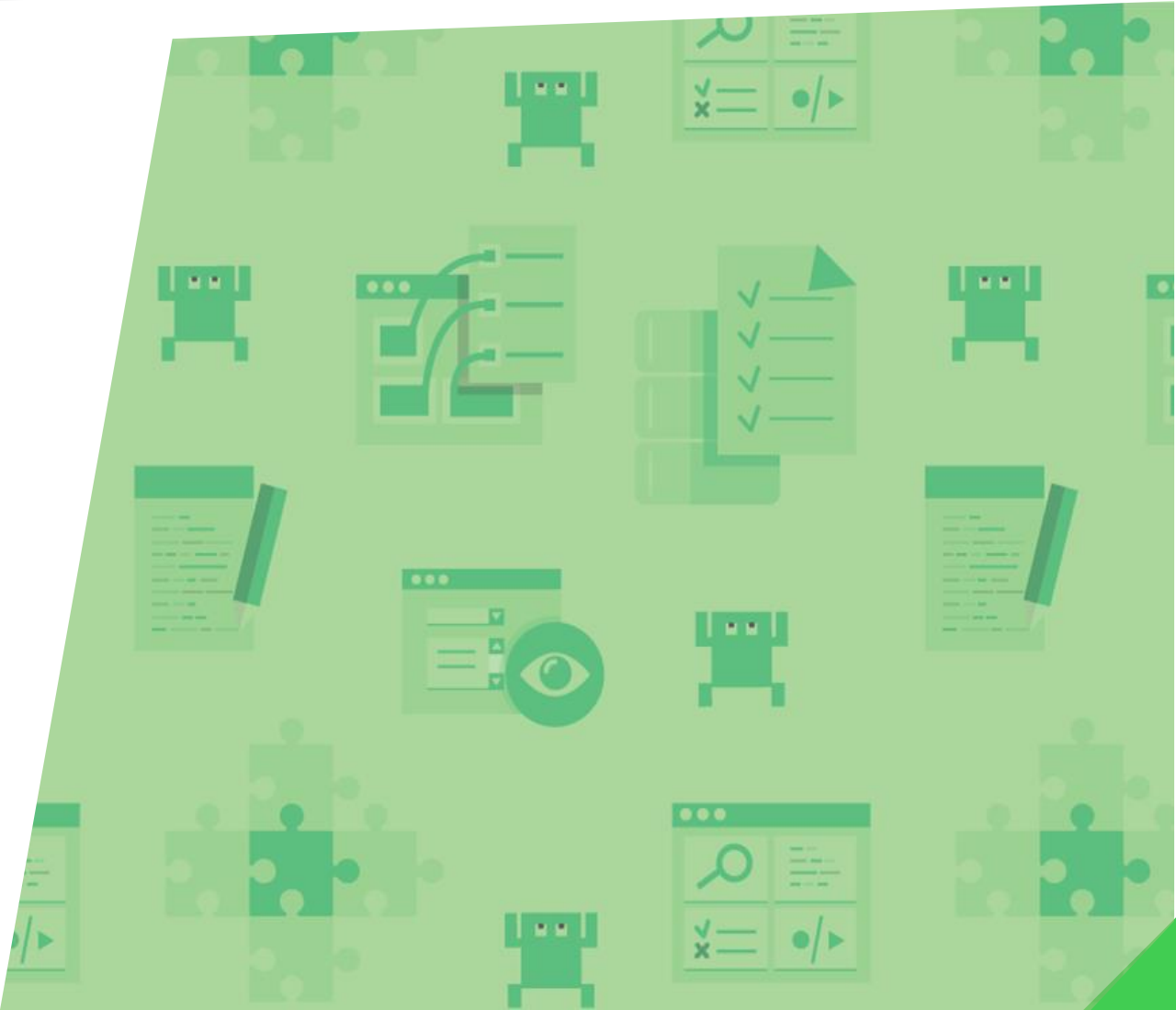
Scripts

```
26 test.compare(table.rowCount, 126)
27 doubleClick(waitForObjectItem(names.address_Book_MyAddresses_adr_File_QTableWidget, "3/1"), 19, 16, Qt.NoModifier, Qt.LeftButton)
28 type(waitForObject(names.file_LineEdit), "Doe")
29 type(waitForObject(names.file_LineEdit), "<Return>")
30 mouseClick(waitForObjectItem(names.address_Book_MyAddresses_adr_File_QTableWidget, "4/1"), 72, 21, 0, Qt.LeftButton)
31 clickButton(waitForObject(names.address_Book_MyAddresses_adr_Remove_QToolButton))
32 clickButton(waitForObject(names.address_Book_Yes_QPushButton))
33 test.compare(waitForObjectExists(names.file_LineEdit), "Doe")
34 test.compare(waitForObjectExists(names.file_LineEdit), "Doe")
35 test.compare(waitForObjectExists(names.file_LineEdit), "Doe")
```

3.1 Overview of Squish GUI Tester

Squish Quick Features

- 1 Recording and Replaying of Tests
- 2 Script- and BDD-based Test Development
- 3 Object-, Image- and OCR-driven



Squish Quick Features

4 Test across platforms and devices

5 Powerful IDE and Integration in CI

6 Video Capture



tests

History

Explore

Manual Testing

Jira

John Smith

Report

Entire Batch

Linux, new-feature, ikarus

Tests

All

Search

Filter...

OS

Linux (1)

branch

new-feature-branch...

host

ikarus (1)

jenkins-squish-tests-new-feature-tests-9

Batch

Test Suite

Table

Sunburst

Code Coverage

1 failed

Reports

1 failed (1 new)

111 passed (99%)

Test Suites

1 failed

111 passed (99%)

Test Suite Runs

Start Time: 4/1/2022, 3:15:31 PM

End Time: 4/1/2022, 5:31:05 PM

Total Duration: 2h 15'35"

Run Duration: 4m 23"

Reports 1

Configurations 1

OS

branch

host

PM 3:15:31, 4/1/2022

Report #119424

Linux new-feature-tests ikarus Jenkins

Tests	Status	Total Skips & Warnings	Duration (min/max)	Older Batches	Actions	
OS						
branch						
host						
suite_starting_appliance Test Suite	✓	0 0 0 0	0.17s 0.17s	✓ ✓	⋮	✓
suite_boiling_water Test Suite	✓	0 0 0 0	0.34s 0.34s	✓ ✓	⋮	✓
suite_checking_tray Test Suite	✓	0 0 0 0	0.41s 0.41s	✓ ✓	⋮	✓
suite_checking_grinder Test Suite	✓	0 0 0 0	0.67s 0.67s	✓ ✓	⋮	✓
suite_dryrun_checkout Test Suite	✓	0 0 0 0	1m 02" 1m 02"	✓ ✓	⋮	✓
suite_test_transactions Test Suite	✓	0 0 0 0	0.17s 0.17s	✓ ✓	⋮	✓
suite_ui_responsivness Test Suite	✓	0 0 0 0	< 1ms < 1ms	✓ ✓	⋮	✓
suite_brew_coffee Test Suite	✗	0 0 0 0	< 1ms < 1ms	✓ ✓	⋮	✗
suite_test_scale Test Suite	✓	0 0 0 0	< 1ms < 1ms	✓ ✓	⋮	
suite_test_water Test Suite						

3.2 Overview of Test Center

Test Center Quick Features

- 1 Central dashboard for test results
- 2 Stream captured videos
- 3 Manage your tests from anywhere



Customers





Wrap-up

- › Record and Replay tests
- › Verifying values and screenshots
- › How to break tests
- › Different ways to approach failing tests
 - › Video is one piece in this puzzle
- › Develop tests with Squish
 - › One way to automate manual testing
- › Manage test results with Test Center
 - › One way to handle the ever-growing number of test results

Q&A

Let's discuss your questions now!



Q&A

- › Further Q&A and open discussion
 - › What pain points do you encounter when testing software?
 - › How do you approach a failed test?
 - › Do you have any preferred way of approaching?
 - › Did you leverage video for debugging tests in the past?
 - › What do you expect from a captured video?

Thank you,
let's have a coffee
and see you
at our booth 21!

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Thomas Piekarski

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Demo Repository

<https://qrco.de/stareast-22-qt-demo>

