

Study 3: B-Assist Patch Suggestion Feedback Questions

The following document replicates the questions which were asked in the survey distributed to Bloomberg software engineers with the purpose of gauging what types of fixes would be most interesting for B-Assist to present. The original survey was created using Google Forms.

Section 0: Consent

- I have asked any questions that I may have about the research, understand what will happen with my data, understand how to withdraw from the research prior to submitting my data, and consent to participate.
 - a. Accept

Section 1: Code Correction

1. Example Suggestion 1

The screenshot shows a GitHub interface. At the top, a code snippet from `src/newssqr1_language.cpp` is displayed, showing lines 32 to 34. Line 34 contains `char *a = NULL;`. Below this, a comment from user 'fixie yesterday' is shown. The comment text is '[clang-tidy] modernize-use-nullptr'. Below the comment, a 'Suggested change' box is visible. It shows a diff for line 34: the original code `char *a = NULL;` is being replaced with `char *a = nullptr;`. At the bottom of the suggestion box are two buttons: 'Commit suggestion' and 'Add suggestion to batch'. Below the suggestion box is a 'Reply...' input field and a 'Resolve conversation' button. At the very bottom, another code snippet is shown, starting with line 35: `const nseutil::Language::Info& lang = nseutil::Language::get(p_langId);`, followed by lines 36, 37, and 38.

- 1.1. How would you respond to this suggestion?
 - a. Accept
 - b. Modify the suggestion and accept it within the GitHub UI
 - c. Ignore/Reject
 - d. Fix the reported issue in my own way (e.g. through other checks/methods)
- 1.2. How useful do you find this suggestion?
 - a. Likert Scale: 1 (Not Useful) - 5 (Very Useful)

2. Example Suggestion 2

43

src/init-variables.cpp

37

+

38

+

int newFunction(int a) {

fixie

1 minute ago

[clang-tidy] misc-unused-parameters

Suggested change

38

-

int newFunction(int a) {

38

+

int newFunction(int /*a*/) {

Commit suggestion

Add suggestion to batch

Reply...

Resolve conversation

39

+

cout << "Hello! Am I functioning correctly?";

40

+

return 42;

41

+

}


- 2.1. How would you respond to this suggestion?
 - a. Accept
 - b. Modify the suggestion and accept it within the GitHub UI
 - c. Ignore/Reject
 - d. Fix the reported issue in my own way (e.g. through other checks/methods)
- 2.2. How useful do you find this suggestion?
 - a. Likert Scale: 1 (Not Useful) - 5 (Very Useful)

3. Example Suggestion 3

322

test/integration/newssql_thread_arbiter_extra.t.cpp

```
291 + ASSERT_TRUE(aborted_thread_count <= nn);
292 + if (aborted_thread_count < nn) {
293 +     if (total_response_count != 1) {
294 +         std::cout << nseutil::Join::join(events) << std::endl;
```

 fixie 13 seconds ago

[clang-tidy] performance-avoid-endl


Suggested change ⓘ

294 - std::cout << nseutil::Join::join(events) << std::endl;

294 + std::cout << nseutil::Join::join(events) << '\n';

Commit suggestion

Add suggestion to batch

 Reply...

Resolve conversation

295 + }

- 3.1. How would you respond to this suggestion?
 - a. Accept
 - b. Modify the suggestion and accept it within the GitHub UI
 - c. Ignore/Reject
 - d. Fix the reported issue in my own way (e.g. through other checks/methods)
- 3.2. How useful do you find this suggestion?
 - a. Likert Scale: 1 (Not Useful) - 5 (Very Useful)


4. Example Suggestion 4

1,924

src/newssql_wildebstclient.cpp

```
1210 + // performance (e.g. particularly with SMCC and faceting).
1211 + if (false /* searchRequest.doClustering() */)
1212 + {
1213 +     totalFoundInfo.wantTotalGroups() = true;
1214 +     useTotalGroups = true;
1215 + }
1216 + else
```

Comment on lines +1211 to +1216

 **fixie** 2 days ago


[remove-dead-code-clang] rsat remove-dead-code-clang refactoring

Suggested change ⓘ

```
1211 - if (false /* searchRequest.doClustering() */)
1212 - {
1213 -     totalFoundInfo.wantTotalGroups() = true;
1214 -     useTotalGroups = true;
1215 - }
1216 - else
```

Commit suggestion ▾

Add suggestion to batch

 Reply...

Resolve conversation

1217 + {

- 4.1. How would you respond to this suggestion?
 - a. Accept
 - b. Modify the suggestion and accept it within the GitHub UI
 - c. Ignore/Reject
 - d. Fix the reported issue in my own way (e.g. through other checks/methods)
- 4.2. How useful do you find this suggestion?
 - a. Likert Scale: 1 (Not Useful) - 5 (Very Useful)

5. Example Suggestion 5

✓ 14 ■■■■■ src/init-variables.cpp

6 +


7 + void function() {

8 + int x;

9 + char *txt;

10 + double d;

Comment on lines +7 to +10

 fixie 2 hours ago

[clang-tidy] cppcoreguidelines-init-variables

Suggested change ⓘ

7 - void function() {

8 - int x;

9 - char *txt;

10 - double d;

7 + #include <math.h>

8 +

9 + void function() {


10 + int x = 0;

11 + char *txt = nullptr;

12 + double d = NAN;

Commit suggestion ▼

Add suggestion to batch



Reply...

- 5.1. How would you respond to this suggestion?
 - a. Accept
 - b. Modify the suggestion and accept it within the GitHub UI
 - c. Ignore/Reject
 - d. Fix the reported issue in my own way (e.g. through other checks/methods)
- 5.2. How useful do you find this suggestion?
 - a. Likert Scale: 1 (Not Useful) - 5 (Very Useful)

6. Example Suggestion 6


36

src/init-variables.cpp

```
16 + void foo(int Value) {
17 +     int Local = 0;
18 +     for (int i = 0; i < 42; i++) {
19 +         if (Value == 1) {
20 +             return;
21 +         } else {
22 +             Local++;
23 +         }

```

Comment on lines +21 to +23

 fixie 1 minute ago


[clang-tidy] readability-else-after-return

Suggested change ⓘ

21	-	} else {
22	-	Local++;
23	-	}
21	+	}
22	+	Local++;

Commit suggestion ▾

Add suggestion to batch

 Reply...

Resolve conversation

24 +


- 6.1. How would you respond to this suggestion?
 - a. Accept
 - b. Modify the suggestion and accept it within the GitHub UI
 - c. Ignore/Reject
 - d. Fix the reported issue in my own way (e.g. through other checks/methods)
- 6.2. How useful do you find this suggestion?
 - a. Likert Scale: 1 (Not Useful) - 5 (Very Useful)

Section 2: Code Formatting

7. Example Suggestion 7

✓ 165 ■■■■■ service/s_fixiecpptest_entry.cpp

163 + // terms of a BFLP license agreement which governs its use.
164 + // ----- END-OF-FILE -----
165 +


 fixie 1 minute ago

[clang-format] Remove extra newline

Suggested change ⓘ

165 -

Commit suggestion ▾Add suggestion to batch

 Reply...

Resolve conversation

- 7.1. How would you respond to this suggestion?
 - a. Accept
 - b. Modify the suggestion and accept it within the GitHub UI
 - c. Ignore/Reject
 - d. Fix the reported issue in my own way (e.g. through other checks/methods)
- 7.2. How useful do you find this suggestion?
 - a. Likert Scale: 1 (Not Useful) - 5 (Very Useful)

8. Example Suggestion 8


✓ 80 ■■■■■ src/fields.cpp

24 +

25 +

26 +

`const clang::DeclRefExpr *expressionReference,`
`const clang::FieldDecl *fieldDecl,`
`const int fieldOffset){`

 fixie 3 days ago

[clang-format] rsat clang-format refactoring

Suggested change ⓘ

26 -


`const int fieldOffset){`

26 +

`const int fieldOffset){`

Commit suggestion ▾

Add suggestion to batch

 Reply...

Resolve conversation

27 +

28 +

`if (fieldDecl) {`
`fieldName=fieldDecl->getNameAsString();`

 fixie 3 days ago

[clang-format] rsat clang-format refactoring

Suggested change ⓘ

28 -

`fieldName=fieldDecl->getNameAsString();`

28 +

`fieldName = fieldDecl->getNameAsString();`

Commit suggestion ▾

Add suggestion to batch

 Reply...

- 8.1. How would you respond to this suggestion?
 - a. Accept
 - b. Modify the suggestion and accept it within the GitHub UI
 - c. Ignore/Reject
 - d. Fix the reported issue in my own way (e.g. through other checks/methods)
- 8.2. How useful do you find this suggestion?
 - a. Likert Scale: 1 (Not Useful) - 5 (Very Useful)

Section 3: Dependency Management

9. Example Suggestion 9

✓ 164 ■■■■■ service/s_fixiecpptest_entry.cpp

7


+ #include <s_fixiecpptest_manifest.h>

8

+ #include <s_fixiecpptest_requestprocessor.h>

9

+ #include <s_fixiecpptest_requestrouter.h>

 **fixie** 23 seconds ago


[fix-your-includes] Remove includes of unused headers

Suggested change ⓘ

9 - #include <s_fixiecpptest_requestrouter.h>

Commit suggestion ▾

Add suggestion to batch

 Reply...

Resolve conversation

10 +

- 9.1. How would you respond to this suggestion?
 - a. Accept
 - b. Modify the suggestion and accept it within the GitHub UI
 - c. Ignore/Reject
 - d. Fix the reported issue in my own way (e.g. through other checks/methods)
- 9.2. How useful do you find this suggestion?
 - a. Likert Scale: 1 (Not Useful) - 5 (Very Useful)

10. Example Suggestion 10

164


service/s_fixiecpptest_entry.cpp


22

+ #include <bsl_iostream.h>

23

+ #include <bsl_memory.h>

 fixie 2 days ago

 ...

[check-missing-bsl-header-includes] Missing include for usage of BSL types

Suggested change ⓘ

23

- #include <bsl_memory.h>

23


+ #include <bsl_memory.h>

24

+ #include <bsl_exception.h>

Commit suggestion ▾

Add suggestion to batch

 Reply...

Resolve conversation

24

+

25

+ BALL_LOG_SET_NAMESPACE_CATEGORY("FIXIECPPTTEST.ENTRY")

- 10.1. How would you respond to this suggestion?
- e. Accept
 - f. Modify the suggestion and accept it within the GitHub UI
 - g. Ignore/Reject
 - h. Fix the reported issue in my own way (e.g. through other checks/methods)
- 10.2. How useful do you find this suggestion?
- b. Likert Scale: 1 (Not Useful) - 5 (Very Useful)