



Code

Blame



Raw



```
56     public class RestSearchAction extends BaseRestHandler {
81         public List<Route> routes() {
82             return List.of(
83                 new Route(GET, "/_search"),
84                 new Route(POST, "/_search"),
85                 new Route(GET,("/{index}/_search"),
86                 new Route(POST,("/{index}/_search")
87             );
88         }
89
90         @Override
91         public Set<String> supportedCapabilities() {
92             return SearchCapabilities.CAPABILITIES;
93         }
94
95         @Override
96         public RestChannelConsumer prepareRequest(final RestRequest request, final NodeClient client) throws IOException {
97             if (client.threadPool() != null && client.threadPool().getThreadContext() != null) {
98                 client.threadPool().getThreadContext().setErrorTraceTransportHeader(request);
99             }
100             SearchRequest searchRequest = new SearchRequest();
101             // access the BwC param, but just drop it
```

Test coverage

```
»
417 public IndexWriter(Directory d, IndexWriterConfig conf)
417     conf.setIndexWriter(this); // prevent reuse by other i
416     config = conf;
416     directory = d;
416     analyzer = config.getAnalyzer();
416     infoStream = config.getInfoStream();
416     mergeScheduler = config.getMergeScheduler();
416     codec = config.getCodec();

416     bufferedUpdatesStream = new BufferedUpdatesStream(info
416     poolReaders = config.getReaderPooling();

416     writeLock = directory.makeLock(WRITE_LOCK_NAME);

414     if (!writeLock.obtain(config.getWriteLockTimeout())) /
0     throw new LockObtainFailedException("Index locked fo

414     boolean success = false;
414     try {
414         OpenMode mode = config.getOpenMode();
414         boolean create;
414         if (mode == OpenMode.CREATE) {
963             create = true;
451         } else if (mode == OpenMode.APPEND) {
302             create = false;
        } else {
```

Run  RandomizedTest ×

✓ 	RandomizedTest	47 ms
✓	randomIntegerWithSeed03	23 ms
	ignoreIfUseless20	5 ms
✓	randomInteger02	1 ms
✓	random00	1 ms
✓	stopOrIdentifyYourThreads30	1 ms
✓	randomLocale10	9 ms
> ✓	randomIntegerWithRange04	6 ms
✓	randomWithSeed01	1 ms

Actions	New workflow
All workflows	
Comment on PR for .asciidoc chang...	
Docs preview comment	
Docs Preview Links	
docs-build	
docs-cleanup	
updatecli-compose	
Validate Gradle Wrapper	
Management	
 Caches	
 Deployments	↗
 Attestations	↗
 Runners	
 Usage metrics	↗
 Performance metrics	↗

Validate Gradle Wrapper #59459: Commit 65e2c3f pushed by davidkyle	8.19	 2 weeks ago ...
Remove index refresh block ITs (replaced by ITs i... Validate Gradle Wrapper #59458: Commit 650ce32 pushed by benchaplin	main	 2 weeks ago ...  27s
Mute org.elasticsearch.index.mapper.vectors.De... Validate Gradle Wrapper #59457: Commit 0b0f4f8 pushed by elasticsearchmachine	main	 2 weeks ago ...  24s
Mute org.elasticsearch.index.mapper.vectors.De... Validate Gradle Wrapper #59456: Commit 6af55c2 pushed by elasticsearchmachine	main	 2 weeks ago ...  1m 1s
[ES QL] Implement new syntax for RERANK and ... Validate Gradle Wrapper #59455: Commit d56a476 pushed by afoucret	main	 2 weeks ago ...  36s
Add test Validate Gradle Wrapper #59454: Commit 9e75c14 pushed by felixbarny	metrics_prototype	 2 weeks ago ...  29s
Upgrade MinIO (& work around bug) (#132178) Validate Gradle Wrapper #59453: Commit 3a285cf pushed by elasticsearchmachine	8.18	 2 weeks ago ...  28s





Push code to production

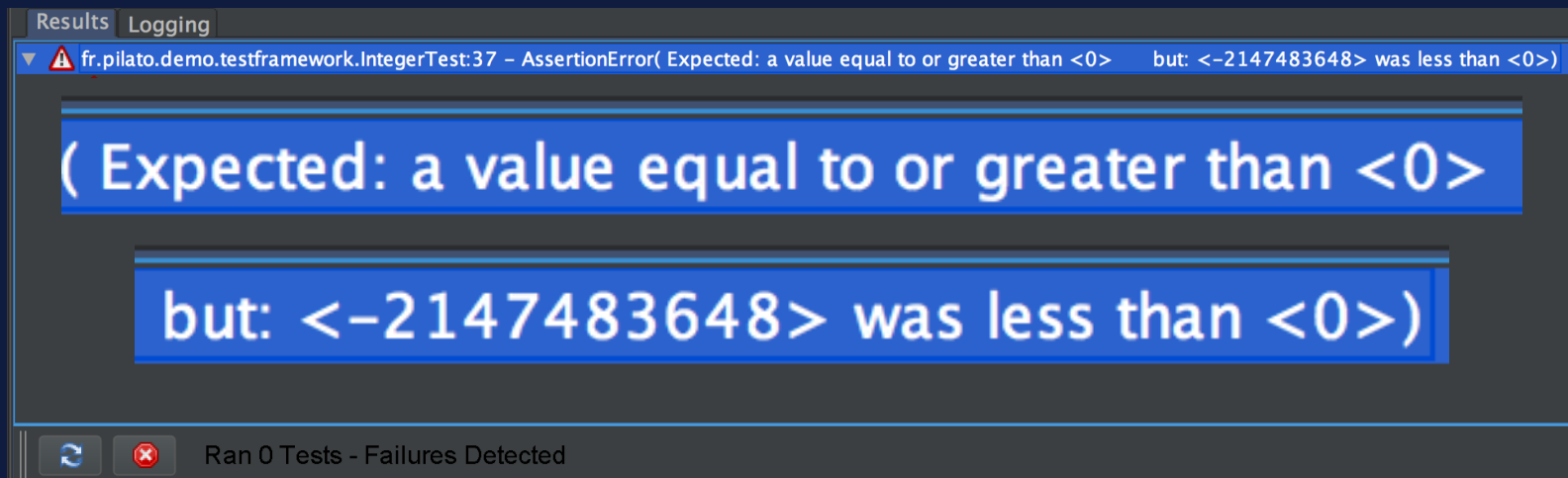
June 4th 1996

Original footage from ESA

https://www.esa.int/ESA_Multimedia/Videos/1996/06/Ariane_501_recording_launch_pad_before_and_at_launch

```
public static int generateInt(int min, int max) {  
    return ThreadLocalRandom.current().nextInt(min, max);  
}
```

```
@Test  
public void testInteger() {  
    int input = generateInt(Integer.MIN_VALUE, Integer.MAX_VALUE);  
    int output = Math.abs(input);  
    assertThat(output).isGreaterThanOrEqualTo(0);  
}
```



```
int output = Math.abs(input);  
assertThat(output).isGreaterThanOrEqualTo(0);
```

Le hasard fait bien les tests

**Randomized
Testing**
Gotta Catch 'em all!



SNOWCAMP

FScrawler

You know, for files!



github.com/dadoonet/fscrawler/

	Update Pull Requests files #525: Pull request <u>#2059</u> synchronize by dadoonet	assertj	3 months ago 1m 22s	...
✓	Switch to AssertJ CodeQL #1388: Pull request <u>#2059</u> synchronize by dadoonet	assertj	3 months ago 5m 6s	...
✗	Switch to AssertJ Build Pull Requests #1195: Pull request <u>#2059</u> synchronize by dadoonet	assertj	3 months ago 3m 58s	...
✓	Switch to AssertJ CodeQL #1387: Pull request <u>#2059</u> synchronize by dadoonet	assertj	3 months ago 4m 53s	...
✓	Switch to AssertJ Update Pull Requests files #524: Pull request <u>#2059</u> synchronize by dadoonet	assertj	3 months ago 1m 12s	...
✓	Switch to AssertJ Update Pull Requests files #523: Pull request <u>#2059</u> synchronize by dadoonet	assertj	3 months ago 1m 10s	...
✓	Switch to AssertJ	assertj	3 months ago	...

<https://github.com/dadoonet/fscrawler/actions/runs/14357866984/job/40251514398#step:4:296>

Summary

Jobs

✓ build

✗ unit

✓ build-docker

○ it

○ it-es7

○ it-es6

○ it-cloud

○ it-serverless

Run details

Usage

Workflow file

unit

failed 3 weeks ago in 38s

Search logs

Explain error

↺

⚙

✗ Run all the unit tests

30s

340

Error:

341

Error:

342

Error:

343

Error:

344

Error:

345

Error:

346

Error:

347

Error:

348

Error:

349

Error:

> ✓ Post Set up JDK 21

1s

> ✓ Post Run actions/checkout@v4

0s

> ✓ Complete job

0s

340

Error:

341

Error:

342

Error:

343

Error:

344

Error:

345

Error:

346

Error:

347

Error:

348

Error:

349

Error:

> ✓ Post Set up JDK 21

1s

> ✓ Post Run actions/checkout@v4

0s

> ✓ Complete job

0s

Throwable #1: `java.lang.NullPointerException`: Cannot invoke "`Elasticsearch.setIndex(String)`" because the return value of "`FsSettings.getElasticsearch()`" is `null`

```
@Test
public void settingsValidation() {
    FsSettings settings = FsSettingsLoader.load();
    settings.getElasticsearch().setIndex(getCurrentTestName());

    // ...
}
```

```
@Test
public void settingsValidation() {
    FsSettings settings = FsSettingsLoader.load();
    settings.getElasticsearch().setIndex(getCurrentTestName());

    // ...
}
```



REPRODUCE WITH:

mvn integration-test -Dtests.locale=az

Throwable #1: java.lang.NullPointerException: Cannot invoke "Elasticsearch.setIndex(String)" because the return value of "FsSettings.getElasticsearch()" is null



It depends!

@Test

```
public void settingsValidationFr() {  
    Locale.setDefault(new Locale.Builder().setLanguageTag("fr").build());  
    FsSettings settings = FsSettingsLoader.load();  
    settings.getElasticsearch().setIndex(getCurrentTestName());  
  
    // ...  
}
```

@Test

```
public void settingsValidationAz() {  
    Locale.setDefault(new Locale.Builder().setLanguageTag("az").build());  
    FsSettings settings = FsSettingsLoader.load();  
    settings.getElasticsearch().setIndex(getCurrentTestName());  
  
    // ...  
}
```

@Test

```
public void settingsValidationEn() {  
    Locale.setDefault(new Locale.Builder().setLanguageTag("en").build());  
    FsSettings settings = FsSettingsLoader.load();  
    settings.getElasticsearch().setIndex(getCurrentTestName());  
}
```

Randomized Testing



Installation (pom.xml - Java)

```
<dependency>  
  <groupId>com.carrotsearch.randomizedtesting</groupId>  
  <artifactId>randomizedtesting-runner</artifactId>  
  <version>2.8.3</version>  
  <scope>test</scope>  
</dependency>
```

Deactivate the default test plugin

```
<plugin>
  <groupId>org.apache.maven.plugins</groupId>
  <artifactId>maven-surefire-plugin</artifactId>
  <version>2.19</version>
  <executions>
    <execution>
      <id>default-test</id>
      <phase>none</phase>
    </execution>
  </executions>
</plugin>
```

Activate the randomized testing plugin

```
<plugin>  
  <groupId>com.carrotsearch.randomizedtesting</groupId>  
  <artifactId>junit4-maven-plugin</artifactId>  
  <version>2.8.3</version>  
  
  ...  
</plugin>
```



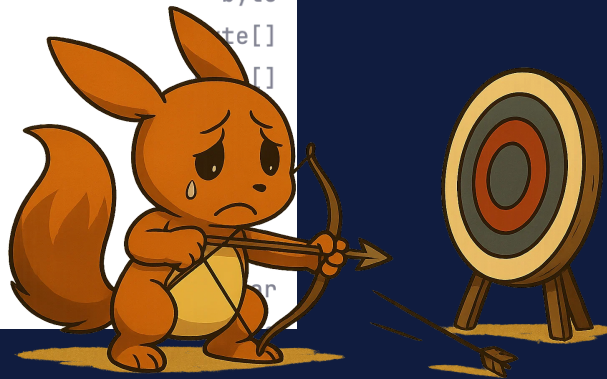
```
@Test new *
public void testCreateClusterAndIndex() {
    int numberOfNodes = randomIntBetween(1, 20);
    int numberOfShards = randomIntBetween(1, 30);
    int numberOfReplicas = randomIntBetween(0, numberOfNodes - 1);
    String indexName = randomAsciiAlphanumOfLength(randomIntBetween(5, 20));

    // Create a cluster with the specified number of nodes
    startCluster(numberOfNodes);

    // Create an index with the specified number of shards and replicas
    createIndex(indexName, numberOfShards, numberOfReplicas);

    // Run tests here
    // ...
}
```

 <code>randomIntBetween(int min, int max)</code>	<code>int</code>
 <code>randomInt()</code>	<code>int</code>
 <code>randomInt(int max)</code>	<code>int</code>
 <code>randomAsciiAlphanumOfLength(int codeUnits)</code>	<code>String</code>
 <code>randomLongBetween(long min, long max)</code>	<code>long</code>
 <code>randomLong()</code>	<code>long</code>
 <code>randomLong(long max)</code>	<code>long</code>
 <code>randomBoolean()</code>	<code>boolean</code>
 <code>randomAsciiLettersOfLengthBetween(int minLetters, int maxLetters)</code>	<code>String</code>
 <code>randomAsciiLettersOfLength(int codeUnits)</code>	<code>String</code>
 <code>randomLocale()</code>	<code>Locale</code>
 <code>randomTimeZone()</code>	<code>TimeZone</code>
 <code>randomAsciiAlphanumOfLengthBetween(int minCodeUnits, int maxCodeUnits)</code>	<code>String</code>
 <code>randomByte()</code>	<code>byte</code>
 <code>randomBytesOfLength(int length)</code>	<code>byte[]</code>
 <code>randomBytesOfLength(int minLength, int maxLength)</code>	<code>[]</code>
 <code>randomDouble()</code>	
 <code>randomFloat()</code>	
 <code>randomFrom(int[] array)</code>	
 <code>randomFrom(byte[] array)</code>	
 <code>randomFrom(char[] array)</code>	
 <code>randomFrom(long[] array)</code>	



Seed





```
@Test
public void testSeed() {
    Random generator = new Random();
    int num = generator.nextInt();
    assertThat(num).isEqualTo(1553932502);
}
```



```
@Test
public void testSeed() {
    Random generator = new Random(12345L);
    int num = generator.nextInt();
    assertThat(num).isEqualTo(1553932502);
}
```



```
...
<configuration>
  <heartbeat>10</heartbeat>
  <jvmOutputAction>pipe,ignore</jvmOutputAction>
  <leaveTemporary>true</leaveTemporary>
  <ifNoTests>warn</ifNoTests>
  <listeners>
    <report-text showThrowable="true" showStackTraces="true" showOutput="always"
      showStatusOk="true" showStatusError="true"
      showStatusFailure="true" showStatusIgnored="true"
      showSuiteSummary="true" />
  </listeners>
  <seed>${tests.seed}</seed>
  <systemProperties combine.children="append">
    <arg.common>arg.common</arg.common>
  </systemProperties>
</configuration>
...
```



REPRODUCE WITH:

```
mvn integration-test -Dtests.seed=489581FE40712E4A  
# -Dtests.locale=az -Dtests.timezone=Asia/Ashkhabad
```



REPRODUCE WITH:

```
mvn integration-test -Dtests.seed=489581FE40712E4A  
# -Dtests.locale=az -Dtests.timezone=Asia/Ashkhabad
```

```
@Test  
@Seed("489581FE40712E4A")  
public void settingsValidationForLocaleAz() {  
    // ...  
}
```



```
<properties>  
  <tests.locale>random</tests.locale>  
</properties>
```

```
<configuration>  
  ...  
  <systemProperties combine.children="append">  
    <arg.common>arg.common</arg.common>  
    <tests.locale>${tests.locale}</tests.locale>  
  </systemProperties>  
</configuration>
```

```
private static final Locale savedLocale = Locale.getDefault();
```

```
@BeforeClass
```

```
public static void setLocale() {  
    String testLocale = System.getProperty("tests.locale", "random");  
    Locale locale = testLocale.equals("random") ? randomLocale() :  
        new Locale.Builder().setLanguageTag(testLocale).build();  
    Locale.setDefault(locale);  
}
```

```
@AfterClass
```

```
public static void resetLocale() {  
    Locale.setDefault(savedLocale);  
}
```

```
@Test
public void withLocale() {
    DateTimeFormatter dateTimeFormatter =
        DateTimeFormatter.ofLocalizedDate(FormatStyle.FULL);
    String format = dateTimeFormatter.format(LocalDate.now());
    System.out.println("locale = " + Locale.getDefault().toLanguageTag());
    System.out.println("format = " + format);
}
```

RUN 1

```
locale = es-PR
format = miércoles 9 de marzo de 2016
```

RUN 2

```
locale = tr-TR
format = 09 Mart 2016 Çarşamba
```

```
mvn test -Dtests.locale=fr-FR
```

```
1> locale = fr-FR  
1> format = mercredi 9 mars 2016
```

✓	RandomizedTest (fr.pilato.talk.randomizedtest)	48 ms
✓	randomWithSeed01	25 ms
✓	randomIntegerWithSeed03	1 ms
✓	stopOrIdentifyYourThreads30	2 ms
✓	randomLocale10	9 ms
✓	random00	2 ms
✓	ignoreIfUseless20	2 ms
✓	randomInteger02	1 ms
✓	randomIntegerWithRange04	6 ms
	RandomizedTest.randomIntegerWithRange	2 ms
	RandomizedTest.randomIntegerWithRange	2 ms
	RandomizedTest.randomIntegerWithRange	1 ms
	RandomizedTest.randomIntegerWithRange	1 ms
	RandomizedTest.randomIntegerWithRange	0 ms

✓	RandomizedTest (fr.pilato.talk.randomizedtest)	41 ms
✓	stopOrIdentifyYourThreads30	3 ms
✓	randomIntegerWithRange04	26 ms
	RandomizedTest.randomIntegerWithRange	22 ms
	RandomizedTest.randomIntegerWithRange	1 ms
	RandomizedTest.randomIntegerWithRange	1 ms
	RandomizedTest.randomIntegerWithRange	1 ms
	RandomizedTest.randomIntegerWithRange	1 ms
✓	ignoreIfUseless20	2 ms
✓	randomWithSeed01	1 ms
✓	randomIntegerWithSeed03	0 ms
✓	random00	0 ms
✓	randomInteger02	1 ms
✓	randomLocale10	8 ms

ZOMBIE THREADS

```
@RunWith(RandomizedRunner.class)
```

```
public class RandomTest {  
    @Test  
    public void stopYourThreads() {  
        new Thread(() -> {  
            public void run() {  
                while (true) {  
                    try { Thread.sleep(1000L); } catch (InterruptedException e) { } }  
                } }, "zombie").start();  
        }  
    }  
}
```



ZOMBIE THREADS

```
@RunWith(RandomizedRunner.class)
```

```
public class RandomTest {  
    @Test  
    public void stopYourThreads() {  
        new Thread(() -> {  
            public void run() {  
                while (true) {  
                    try { Thread.sleep(1000L); } catch (InterruptedException e) { } }  
                } }, "zombie").start();  
        }  
    }  
}
```

com.carrotsearch.randomizedtesting.ThreadLeakError: **1 thread leaked** from SUITE scope at
fr.pilato.demo.testframework.RandomTest:

```
1) Thread[id=12, name=zombie, state=TIMED_WAITING, group=TGRP-RandomTest]  
   at java.lang.Thread.sleep(Native Method)  
   at fr.pilato.demo.testframework.RandomTest$1.run(RandomTest.java:180)  
   at java.lang.Thread.run(Thread.java:745)
```

at __randomizedtesting.SeedInfo.seed([1CD01D6C55CD93C0]:0)



ZOMBIE THREADS

```
@RunWith(RandomizedRunner.class)
@ThreadLeakFilters(filters = { FriendlyZombieFilter.class })
public class RandomTest {
    @Test
    public void identifyYourThreads() {
        new Thread(() -> {
            public void run() {
                while (true) {
                    try { Thread.sleep(1000L); } catch (InterruptedException e) { } }
                } }, "friendly-zombie").start();
    }
}

public class FriendlyZombieFilter implements ThreadFilter {
    public boolean reject(Thread t) {
        return "friendly-zombie".equals(t.getName());
    }
}
```



Back to the bug

```
@Test
```

```
public void settingsValidation() {  
    FsSettings settings = FsSettingsLoader.load();  
    settings.getElasticsearch().setIndex(getCurrentTestName());  
  
    // ...  
}
```



```
@Test
public void testLocaleAz() throws Exception {
    Locale.setDefault(new Locale.Builder().setLanguageTag("az").build());
    Gestalt gestalt = new GestaltBuilder()
        .addSource(MapConfigSourceBuilder.builder()
            .addCustomConfig("elasticsearch.index", "foo")
            .build())
        .build();
    gestalt.loadConfigs();
    assertThat(gestalt.getConfigOptional("elasticsearch", Elasticsearch.class)).isPresent();
}
```

```
@Test
public void testLocaleFr() throws Exception {
    Locale.setDefault(new Locale.Builder().setLanguageTag("fr").build());
    Gestalt gestalt = new GestaltBuilder()
        .addSource(MapConfigSourceBuilder.builder()
            .addCustomConfig("elasticsearch.index", "foo")
            .build())
        .build();
    gestalt.loadConfigs();
    assertThat(gestalt.getConfigOptional("elasticsearch", Elasticsearch.class)).isPresent();
}
```



credmond-git on Apr 11 · edited by credmond-git

Edits ▾

Collaborator



I found the root cause of the issue.

Gestalt uses the following pattern to tokenize a path.

```
pattern: ^((?<name>[\w .,+=-;:"'`~!@#%&*()\<>]+)(?<array>\[[(?<index>\d*)])?)?$
```

When presented with the word: 'flushinterval'

the following doesn't find a match in the PathLexer: `Matcher matcher = pathPattern.matcher(word);`

It seems to work in every other Locale, but Az?

I need to look into why this is happening, and how to fix it.



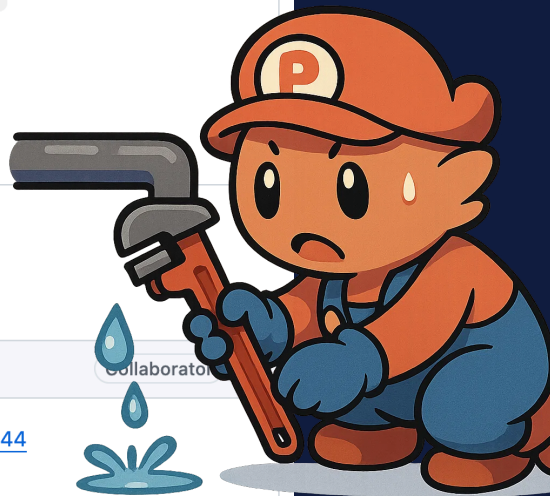
credmond-git mentioned this on Apr 11

[fix: specify the root locale when using toLower. #243](#)



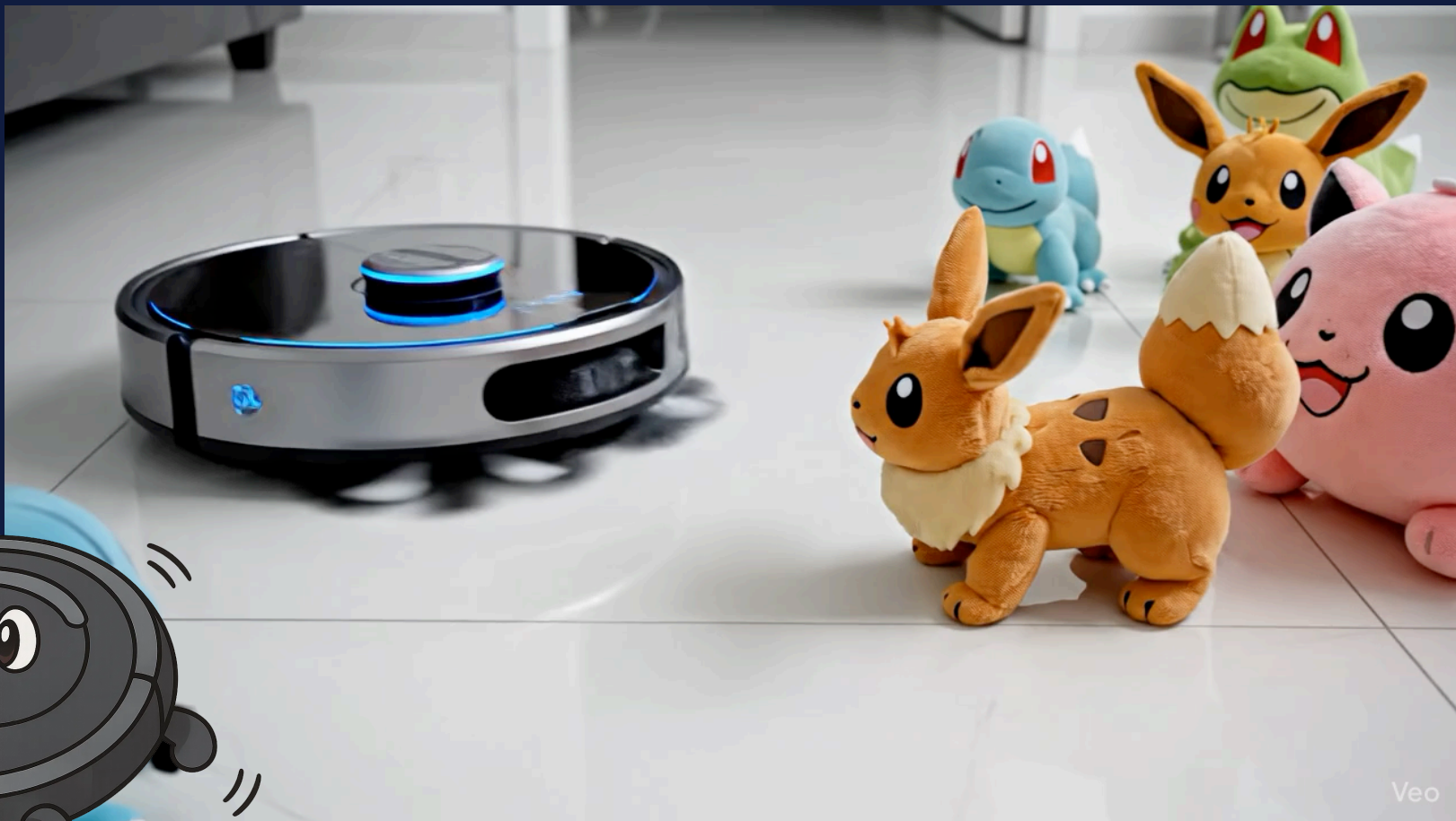
credmond-git on Apr 11

I also made a fix so we can support different languages Unicode characters for object field names. [#244](#)



```
@Test(expected = NullPointerException.class)
@Seed("489581FE40712E4A")
public void testGestalt242() throws Exception {
    FsSettings settings = FsSettingsLoader.load();
    // This is supposed to fail because of:
    // https://github.com/gestalt-config/gestalt/issues/242
    settings.getElasticsearch().setIndex(getCurrentTestName());
    fail("The Gestalt project probably fixed issue 242");
}
```

Limitations



Veo





David Pilato



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 [@dadoonet](https://twitter.com/dadoonet)

 <https://david.pilato.fr/>

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slides



SNOWCAMP

<https://david.pilato.fr/snowcamp26>