Testing & Releasing Elasticsearch & the Elastic Stack

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Branch: master

Commits on Oct 26, 2019

Wrap ResponseException in AssertionError in ILM/CCR tests (#48489) ...
gwbrown committed 2 days ago — Verified — 94fe480

Commits on Oct 25, 2019

Refresh should not acquire readLock (#48414) ...
dnhatn committed 2 days ago — Verified — 379e847

Add slices to delete and update by query in HLRC (#48420) ...
hub-cap committed 2 days ago — Verified — 27c1902

[DOCS] Remove extraneous comma in Enrich Stats API's JSON response (#... ...
ycombinator authored and jrodewig committed 2 days ago — 93ecb9b

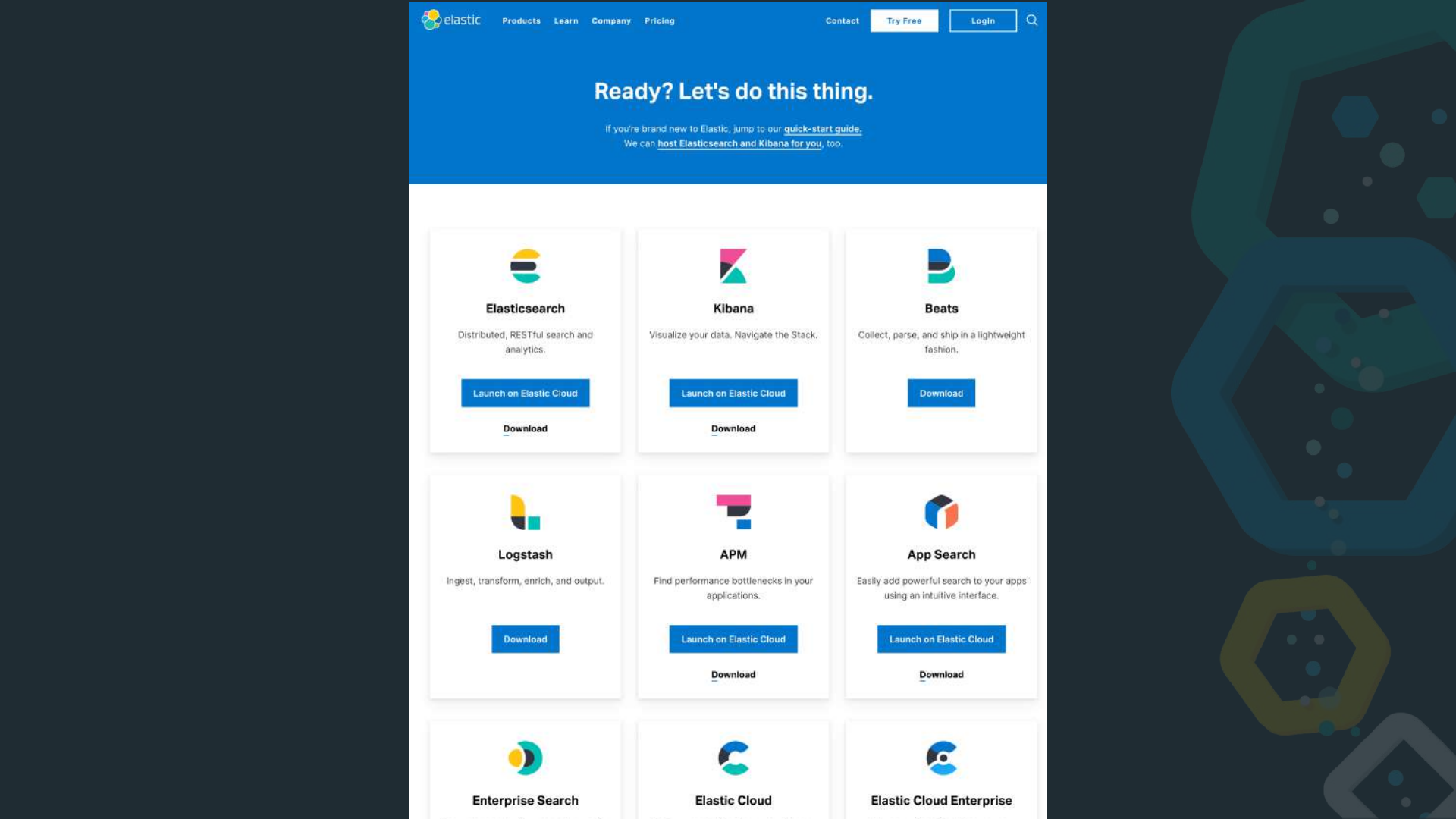
Mute RestClientMultipleHostsIntegTests.testCancelAsyncRequests (#48535) ...
tlrx committed 2 days ago — Verified — 1744f1f

Upgrade to Netty 4.1.43 (#48484) ...
tbrooks8 committed 2 days ago — Verified — d084b93

Download Elasticsearch

Want it hosted? Deploy on Elastic Cloud. **Get Started »**

Version:	7.4.1
Release date:	October 23, 2019
License:	**Elastic License**
Downloads:	**WINDOWS** sha asc **LINUX** sha asc **RPM** sha asc **MACOS** sha asc **DEB** sha asc **MSI (BETA)** sha asc
Package Managers:	Install with **yum, dnf, or zypper** Install with **apt-get** Install with **homebrew**
Containers:	Run with **Docker**
Notes:	Running on Kubernetes? Try **Elastic Cloud on Kubernetes** (alpha) or the Elasticsearch **Helm Chart (beta)**. This default distribution is governed by the Elastic License, and includes the **full set of free features**. View the detailed release notes **here**. Not the version you're looking for? View **past releases**. The pure Apache 2.0 licensed distribution is available **here**. The distribution that's not bundled with a JDK is available **here**. You can obtain the source code for the bundled JDK **here**.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Spin up hosted Elasticsearch, Kibana, and Elastic Stack features.

Launch

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JDBC Client

A JDBC driver for Elasticsearch

Download

ODBC Client

An ODBC driver for Elasticsearch

Download

X-Pack

Only for versions 6.2 and older

Install

Today's goal

Transfer Elasticsearch testing & automation knowledge into your own project

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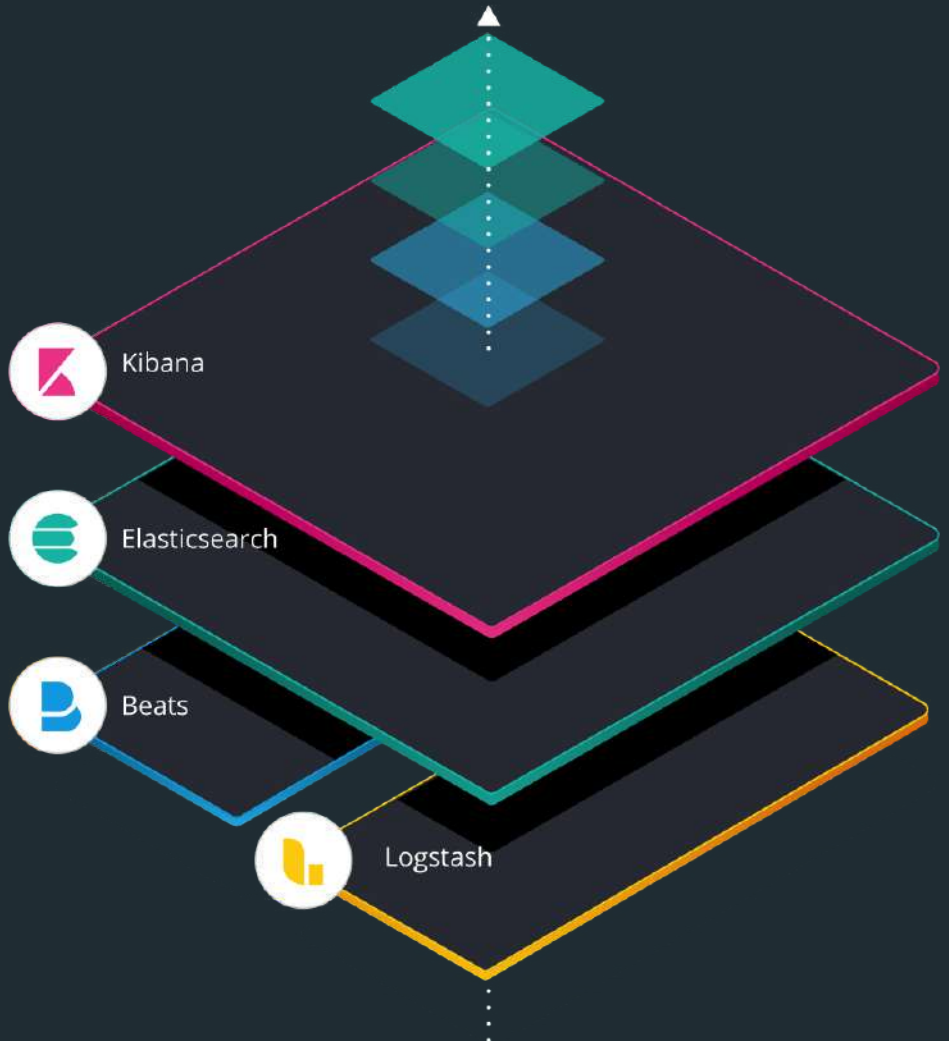

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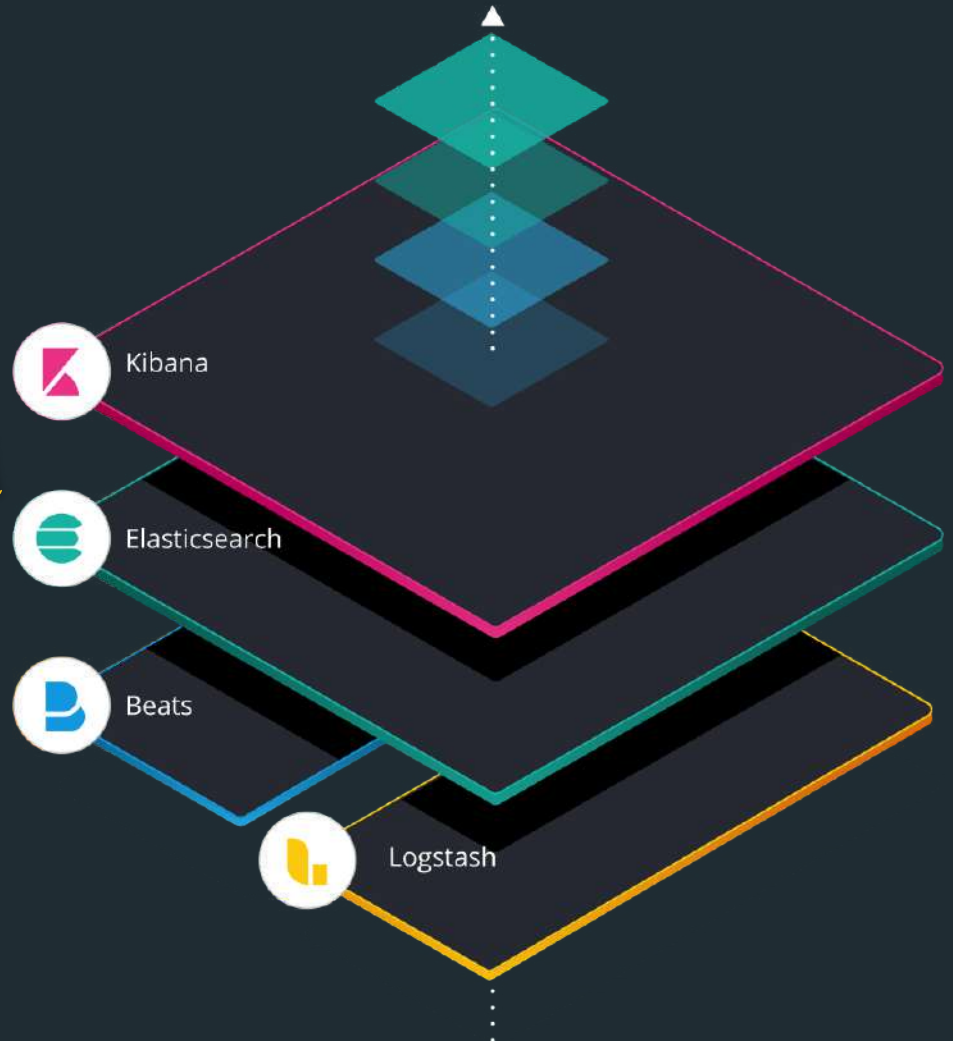
main topic



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Elasticsearch in 10 seconds

- Search Engine (FTS, Analytics, Geo), real-time
- Distributed, scalable, highly available, resilient
- Interface: HTTP & JSON
- Heart of the Elastic Stack

Agenda

- Unit Testing
- Integration Testing
- Package Testing
- BWC Testing
- Documentation Testing
- CI: OS/JVM Testing
- Releasing

Unit Testing

ESTestcase

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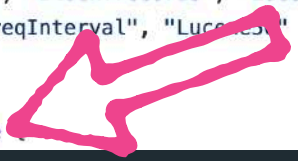
ESTestCase

```
41  public class DateFormattersTests extends ESTestCase {
42
43      public void testWeekBasedDates() {
44          // as per WeekFields.ISO first week starts on Monday and has minimum 4 days
45          DateFormatter dateFormatter = DateFormatters.forPattern("YYYY-ww");
46
```

ESTestCase

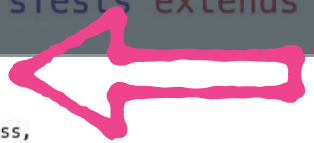
```
41  public class DateFormattersTests extends ESTestCase {
42
43      pu
44                                                          s minimum 4 days
45                                                          YYY-ww");
46
```

```
153 /**
154  * Base testcase for randomized unit testing with Elasticsearch
155  */
156 @Listeners({
157         ReproduceInfoPrinter.class,
158         LoggingListener.class
159 })
160 @ThreadLeakScope(Scope.SUITE)
161 @ThreadLeakLingering(linger = 5000) // 5 sec lingering
162 @TimeoutSuite(millis = 20 * TimeUnits.MINUTE)
163 @LuceneTestCase.SuppressSysoutChecks(bugUrl = "we log a lot on purpose")
164 // we suppress pretty much all the lucene codecs for now, except asserting
165 // assertingcodec is the winner for a codec here: it finds bugs and gives clear exceptions.
166 @SuppressCodecs({
167         "SimpleText", "Memory", "CheapBastard", "Direct", "Compressing", "FST50", "FSTOrd50",
168         "TestBloomFilteredLucenePostings", "MockRandom", "BlockTreeOrds", "LuceneFixedGap",
169         "LuceneVarGapFixedInterval", "LuceneVarGapDocFreqInterval", "Lucene
170 })
171 @LuceneTestCase.SuppressReproduceLine
172 public abstract class ESTestCase extends LuceneTestCase {
```



ESTestCase

```
41  public class DateFormattersTests extends ESTestCase {
42
43      pu
44                                                    s minimum 4 days
45                                                    YY-ww");
46
```



```
198 @RunWith(RandomizedRunner.class)
199 @TestMethodProviders({
200   LuceneJUnit3MethodProvider.class,
201   JUnit4MethodProvider.class
202 })
203 @Listeners({
204   RunListenerPrintReproduceInfo.class,
205   FailureMarker.class
206 })
207 @SeedDecorators({MixWithSuiteName.class}) // See LUCENE-3995 for rationale.
208 @ThreadLeakScope(Scope.SUITE)
209 @ThreadLeakGroup(Group.MAIN)
210 @ThreadLeakAction({Action.WARN, Action.INTERRUPT})
211 @ThreadLeakLingering(linger = 20000) // Wait long for leaked threads to complete before failure. zk needs this.
212 @ThreadLeakZombies(Consequence.IGNORE_REMAINING_TESTS)
213 @TimeoutSuite(millis = 2 * TimeUnits.HOUR)
214 @ThreadLeakFilters(defaultFilters = true, filters = {
215     QuickPatchThreadsFilter.class
216 })
217 @TestRuleLimitSysouts.Limit(
218     bytes = TestRuleLimitSysouts.DEFAULT_LIMIT,
219     hardLimit = TestRuleLimitSysouts.DEFAULT_HARD_LIMIT)
220 public abstract class LuceneTestCase extends Assert {
```

ESTestCase

```
84  /**
85   * A {@link Runner} implementation for running randomized test cases with
86   * predictable and repeatable randomness.
87   *
88   * <p>Supports the following JUnit4 features:
89   * <ul>
90   *   <li>{@link BeforeClass}-annotated methods (before all tests of a class/superclass),</li>
91   *   <li>{@link Before}-annotated methods (before each test),</li>
92   *   <li>{@link Test}-annotated methods,</li>
93   *   <li>{@link After}-annotated methods (after each test),</li>
94   *   <li>{@link AfterClass}-annotated methods (after all tests of a class/superclass),</li>
95   *   <li>{@link Rule}-annotated fields implementing {@link org.junit.rules.MethodRule}
96   *       and {@link TestRule}.</li>
97   * </ul>
98   *
```

22072 public abstract class LuceneTestCase extends Assert {

Random methods

```
public void testRandomStringLength() {
    String randomString = randomAlphaOfLength(10);
    assertThat(randomString.length(), is(10));

    boolean randomBoolean = randomBoolean();
    assertThat(randomBoolean, is(anyOf(is(true), is(false))));

    final Integer randomInt = randomFrom(1, 22, 11, 41, 58);
    assertThat(randomInt, is(allOf(greaterThanOrEqualTo(1), lessThanOrEqualTo(58))));

    final int randomIntBetween = randomIntBetween(1, 10);
    assertThat(randomIntBetween, is(allOf(greaterThanOrEqualTo(1), lessThanOrEqualTo(10))));

    final long nonNegativeLong = randomNonNegativeLong();
    assertThat(nonNegativeLong, is(greaterThanOrEqualTo(0L)));

    final ZoneId zoneId = randomZone();
    assertThat(ZoneId.getAvailableZoneIds(), hasItem(zoneId.toString()));

    final Locale locale = randomLocale(random());
    assertThat(Arrays.asList(Locale.getAvailableLocales()), hasItem(locale));
}
```

Random methods

```
public void testRandomStringLength() {
    String randomString = randomAlphaOfLength(10);
    assertThat(randomString.length(), is(10));
}
```

Random methods

```
public void testRandomStringLength() {
    String randomString = randomAlphaOfLength(10);
    assertThat(randomString.length(), is(10));
}
```

```
public void testRandomStringLength() {
    String randomString = randomAlphaOfLength(10);
    assertThat(randomString.length(), is(Integer.MAX_VALUE));
}
```

Randomization Example

```
private int add (int a, int b) {
    assert a > 0;
    assert b > 0;
    return a + b;
}
```

Randomization Example

```
private int add (int a, int b) {
    assert a > 0;
    assert b > 0;
    return a + b;
}

public void testAdd() {
    assertThat(add(1, 1), is(2));
    assertThat(add(2, 2), is(4));
}
```

Randomization Example

```
private int add (int a, int b) {
    assert a > 0;
    assert b > 0;
    return a + b;
}

public void testAdd() {
    final int a = randomIntBetween(0, Integer.MAX_VALUE);
    final int b = randomIntBetween(0, Integer.MAX_VALUE);
    assertThat(add(a, b), allOf(greaterThanOrEqualTo(a), greaterThanOrEqualTo(b)));
}
```

Randomization Example

```
private int add (int a, int b) {
    assert a > 0;
    assert b > 0;
    return a + b;
}

@Repeat(iterations = 1000)
public void testAdd() {
    final int a = randomIntBetween(0, Integer.MAX_VALUE);
    final int b = randomIntBetween(0, Integer.MAX_VALUE);
    assertThat(add(a, b), allOf(greaterThanOrEqualTo(a), greaterThanOrEqualTo(b)));
}
```

Randomization Example

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private int add (int a, int b) {
    assert a > 0;
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    return a + b;
}

@Repeat(iterations = 1000)
public void testAdd() {
    final int a = randomIntBetween(0, Integer.MAX_VALUE);
    final int b = randomIntBetween(0, Integer.MAX_VALUE);
    assertThat(add(a, b), allOf(greaterThanOrEqualTo(a), greaterThanOrEqualTo(b)));
}
```

```
java.lang.AssertionError:

Expected: (a value equal to or greater than <1667057423>
           and a value equal to or greater than <1800656534>)
     but: a value equal to or greater than <1667057423>
          <-827253339> was less than <1667057423>
```

Randomization Example

```
private int add (int a, int b) {
    assert a > 0;
    assert b > 0;
    return a + b;
}

@Repeat(iterations = 1000)
public void testAdd() {
    final int a = randomIntBetween(0, Integer.MAX_VALUE);
    final int b = randomIntBetween(0, Integer.MAX_VALUE);
    assertThat(add(a, b), allOf(greaterThanOrEqualTo(a), greaterThanOrEqualTo(b)));
}

REPRODUCE WITH: ./gradlew ':server:test'
  --tests "de.spinscale.MyTest.testAdd"
  -Dtests.seed=EC29A319F9128F9A
  -Dtests.locale=pl-PL
  -Dtests.timezone=America/St_Kitts
```

Randomization Example

```
private int add (int a, int b) {
    assert a > 0;
    assert b > 0;
    return a + b;
}

@Seed("EC29A319F9128F9A")
public void testAdd() {
    final int a = randomIntBetween(0, Integer.MAX_VALUE);
    final int b = randomIntBetween(0, Integer.MAX_VALUE);
    assertThat(add(a, b), allOf(greaterThanOrEqualTo(a), greaterThanOrEqualTo(b)));
}
```

ESTestCase goodies

- Thread leak detection
- Change log level for single test/package
- Checks for excessive sysout/err writes
- Test method order is randomized
- Test class order is randomized
- Deprecation logging checks
- No inflight search contexts

Integration Testing

YAML ftw!

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HTTP Integration tests

- Run tests against Elasticsearch HTTP interface
- Tests are written in YAML
- API definition is written in JSON
- `ESClientYamlSuiteTestCase` to extend
- All official clients are using the same spec to guarantee feature parity

API definition


```
{
  "get":{
    "documentation":{
      "url":"https://www.elastic.co/guide/en/elasticsearch/reference/master/docs-get.html",
      "description":"Returns a document."
    },
    "stability":"stable",
    "url":{
      "paths":[
        {
          "path":"/{index}/_doc/{id}",
          "methods":[
            "GET"
          ],
          "parts":{
            "id":{
              "type":"string",
              "description":"The document ID"
            },
            "index":{
              "type":"string",
              "description":"The name of the index"
            }
          }
        }
      ]
    },
    "params":{
      "preference":{
        "type":"string",
        "description":"Specify the node or shard the operation should be performed on (default: random)"
      }
      ...
    }
  }
}
```

Test definition

```
---
"Basic":

  - do:
      index:
        index: test_1
        id:    中文
        body:  { "foo": "Hello: 中文" }

  - do:
      get:
        index: test_1
        id:    中文

  - match: { _index:   test_1 }
  - match: { _id:      中文      }
  - match: { _source:  { foo: "Hello: 中文" } }
```

More integration testing

- Test against kerberos/samba/openldap/shibboleth-idp using docker and docker-compose
- S3 integration testing using minio (via docker-compose)
- Testing the docker image via docker-compose

Package Testing

Containers

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Elasticsearch: A lot of flavours

- tar.gz, zip, deb, rpm
- apt / yum repositories
- docker images
- osx brew tap
- Windows MSI
- helm chart, ECK (K8s operator)
- puppet, ansible, chef

Testing packages

- Use vagrant to download/install distributions
- `ubuntu-1604`, `ubuntu-1804`, `debian-8`, `debian-9`, `centos-6`, `centos-7`, `oel-6`, `oel-7`, `fedora-28`, `fedora-29`, `opensuse-42`, `sles-12`, `rhel-8`, `windows-2012r2`, `windows-2016`

Testing packages

- Test package behaviour (install/upgrade/delete)
- Moved from bats to Java
- package installation/start/stop/uninstall

https://github.com/elastic/elasticsearch/tree/master/qa/os

BWC Testing

You get an upgrade, everyone gets an upgrade!

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BWC Testing

- Upgrades must be supported and tested!
- Full cluster restart
- Rolling restarts between minor versions
- Rolling restarts from the latest old major version to the current major version, i.e. **6.8.8** to **7.6.2**

Rolling upgrade tests

Rolling upgrade tests

Rolling upgrade tests

upgrade

Rolling upgrade tests

Rolling upgrade tests

Rolling upgrade tests

Rolling upgrade tests

Rolling upgrade tests

Rolling upgrade tests

Rolling upgrade tests

Documentation Testing

Y'all doing this, right?

elastic

Documentation Testing

- All documentation is written in asciidoc
- Fire up a test cluster
- Extract snippets from documentation
- Run snippets against cluster
- Optionally: check response contents

Sample snippet

```
[source,console]
----------------------------------------
GET twitter/_doc/0
----------------------------------------
// TEST[setup:twitter]
```

Sample snippet

```
[source,console-result]
--------------------------------------------------
{
    "_index" : "twitter",
    "_id" : "0",
    "_version" : 1,
    "_seq_no" : 10,
    "_primary_term" : 1,
    "found": true,
    "_source" : {
        "user" : "kimchy",
        "date" : "2009-11-15T14:12:12",
        "likes": 0,
        "message" : "trying out Elasticsearch"
    }
}
--------------------------------------------------
// TESTRESPONSE[s/"_seq_no" : \d+/"_seq_no" : $body._seq_no/ s/"_primary_term" :
1/"_primary_term" : $body._primary_term/]
```

build.gradle FTW

One build system to rule them all

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All you need is `gradle`

- Elasticsearch uses gradle for everything
- All tests can be triggered via gradle
- Try to reduce dependency external tools

PR testing

Immediate feedback...

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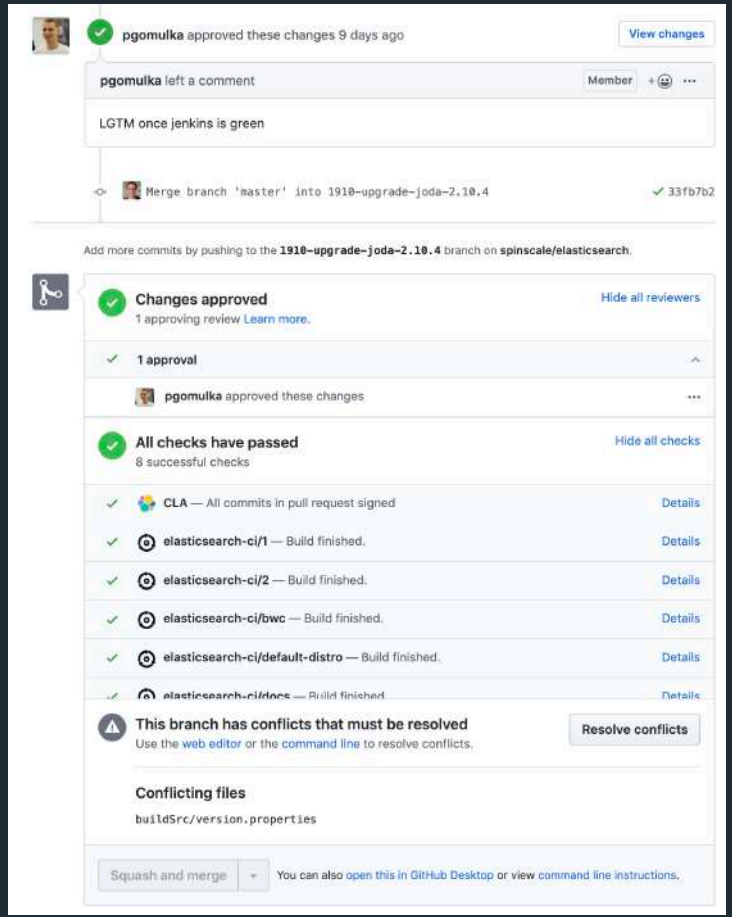
Github PR testing

- Every commit to an open PR triggers a build
- Trigger test run via github
- Trigger merge and test run via github

Github PR testing



Verification after merge

CI setup

JVM/OS matrix based testing

elastic

People
Build History
Project Relationship
Check File Fingerprint
Open Blue Ocean

Build Queue (8)

elastic / elasticsearch # master - intake bwc
elastic / elasticsearch # master - intake part 2
elastic / elasticsearch # master - intake part 1
elastic / elasticsearch # master - intake bwc
elastic / elasticsearch # master - intake part 2
elastic / elasticsearch # master - intake part 1
elastic / elasticsearch # pull-request - Windows packaging tests matrix » windows-2019
elastic / elasticsearch # pull-request - oss-distro docs

Build Executor Status

master

1 Idle
2 Idle
3 Idle
4 Idle
5 Idle
6 Idle
7 Idle
8 Idle
9 Idle
10 Idle
11 Idle
12 Idle
13 Idle

All | Docs | Elasticsearch | Elasticsearch 6.8 | Elasticsearch 7.4 | Elasticsearch 7.5 | Elasticsearch 7.x | Elasticsearch Hadoop | Elasticsearch master | Lucene | Machine Learning | Main

S	W	Name ↓	Last Success	Last Failure	Last Duration
		elastic / elasticsearch # 5.0 - docs check	N/A	4 mo 22 days - #1	59 sec
		elastic / elasticsearch # 5.1 - docs check	N/A	4 mo 22 days - #1	25 sec
		elastic / elasticsearch # 5.2 - docs check	N/A	4 mo 22 days - #1	24 sec
		elastic / elasticsearch # 5.3 - docs check	N/A	3 days 18 hr - #3	33 sec
		elastic / elasticsearch # 5.4 - docs check	N/A	3 days 18 hr - #4	30 sec
		elastic / elasticsearch # 5.5 - docs check	N/A	1 mo 1 day - #5	27 sec
		elastic / elasticsearch # 6.0 - docs check	29 days - #6	N/A	10 min
		elastic / elasticsearch # 6.1 - docs check	29 days - #7	N/A	7 min 41 sec
		elastic / elasticsearch # 6.2 - docs check	29 days - #9	N/A	7 min 40 sec
		elastic / elasticsearch # 6.3 - docs check	8 days 9 hr - #20	8 days 13 hr - #19	8 min 12 sec
		elastic / elasticsearch # 6.4 - docs check	15 days - #22	8 days 11 hr - #26	5 min 55 sec
		elastic / elasticsearch # 6.5 - docs check	8 days 14 hr - #31	N/A	7 min 14 sec
		elastic / elasticsearch # 6.6 - docs check	8 days 19 hr - #38	N/A	7 min 18 sec
		elastic / elasticsearch # 6.7 - docs check	N/A	9 days 9 hr - #10	1 min 1 sec
		elastic / elasticsearch # 6.8 - backwards compatibility matrix	2 hr 9 min - #244	1 day 18 hr - #239	40 min
		elastic / elasticsearch # 6.8 - branch consistency	3 hr 44 min - #144	8 days 3 hr - #136	2 min 7 sec
		elastic / elasticsearch # 6.8 - default distribution backwards compatibility matrix	6 hr 5 min - #238	2 days 14 hr - #231	45 min
		elastic / elasticsearch # 6.8 - default-distro	1 hr 27 min - #429	16 hr - #427	20 min
		elastic / elasticsearch # 6.8 - encryption at rest	5 hr 43 min - #192	3 days 5 hr - #186	2 hr 17 min
		elastic / elasticsearch # 6.8 - intake	1 day 17 hr - #165	2 days 3 hr - #161	1 hr 31 min
		elastic / elasticsearch # 6.8 - matrix java periodic	1 day 23 hr - #282	11 hr - #285	2 hr 55 min
		elastic / elasticsearch # 6.8 - oss-distro (docs)	1 hr 42 min - #429	N/A	6 min 58 sec
		elastic / elasticsearch # 6.8 - packaging tests	21 hr - #543	7 days 0 hr - #526	3 hr 25 min
		elastic / elasticsearch # 6.8 - periodic	1 day 18 hr - #707	9 days 18 hr - #699	2 hr 39 min

elasticsearch-ci-immutable-debian-9-1572000303858383668 (offline)

1 elastic / elasticsearch-hadoop # 7.4 - periodic #57

elasticsearch-ci-immutable-debian-9-1572000917005254531 (offline)

1 elastic / elasticsearch # 7.x - unix compatibility » debian-9&&immutable #345

elasticsearch-ci-immutable-docs-1572003592957050084 (offline)

1 elastic / elasticsearch # PR - docs pull request #7916

elasticsearch-ci-immutable-fedora-29-1572000637758442052 (offline)

1 elastic / elasticsearch # 7.x - unix compatibility » fedora-29&&immutable #345

elasticsearch-ci-immutable-fedora-29-1572002126358559047 (offline)

1 elastic / elasticsearch # master - intake part 2 #1980

elasticsearch-ci-immutable-fedora-29-1572002171758036900 (offline)

1 elastic / elasticsearch # pull-request - default distro tests #9412

elasticsearch-ci-immutable-fedora-29-1572003427657004674 (offline)

1 elastic / elasticsearch # pull-request-1 #9654

elasticsearch-ci-immutable-light-1571988611255741290 (offline)

1 elastic / elasticsearch # 7.4 plaform support matrix #112

elasticsearch-ci-immutable-light-1571993832222006535 (offline)

1 elastic / elasticsearch # 7.5 plaform support matrix #18

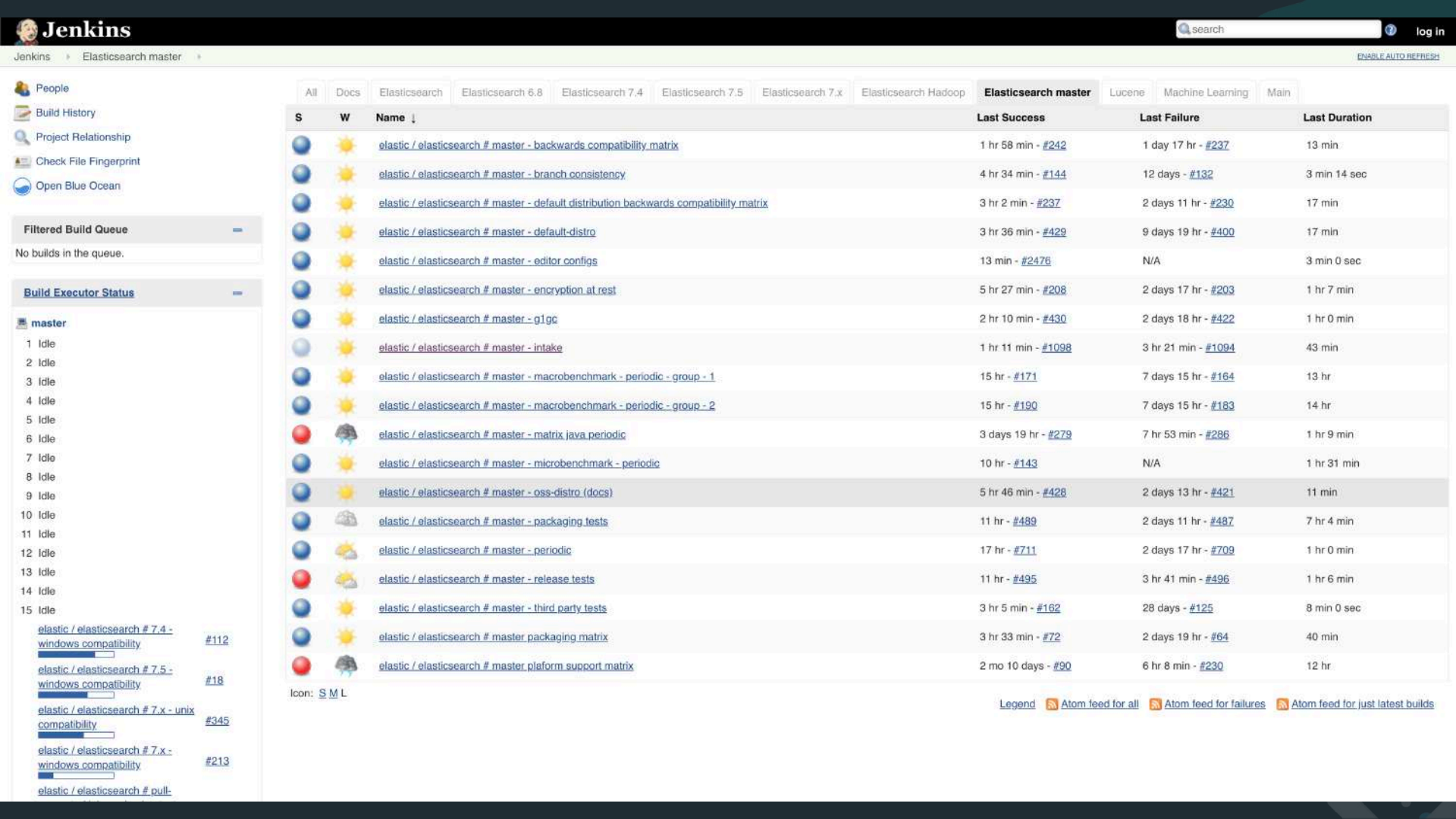
elasticsearch-ci-immutable-light-1572000782887883767 (offline)

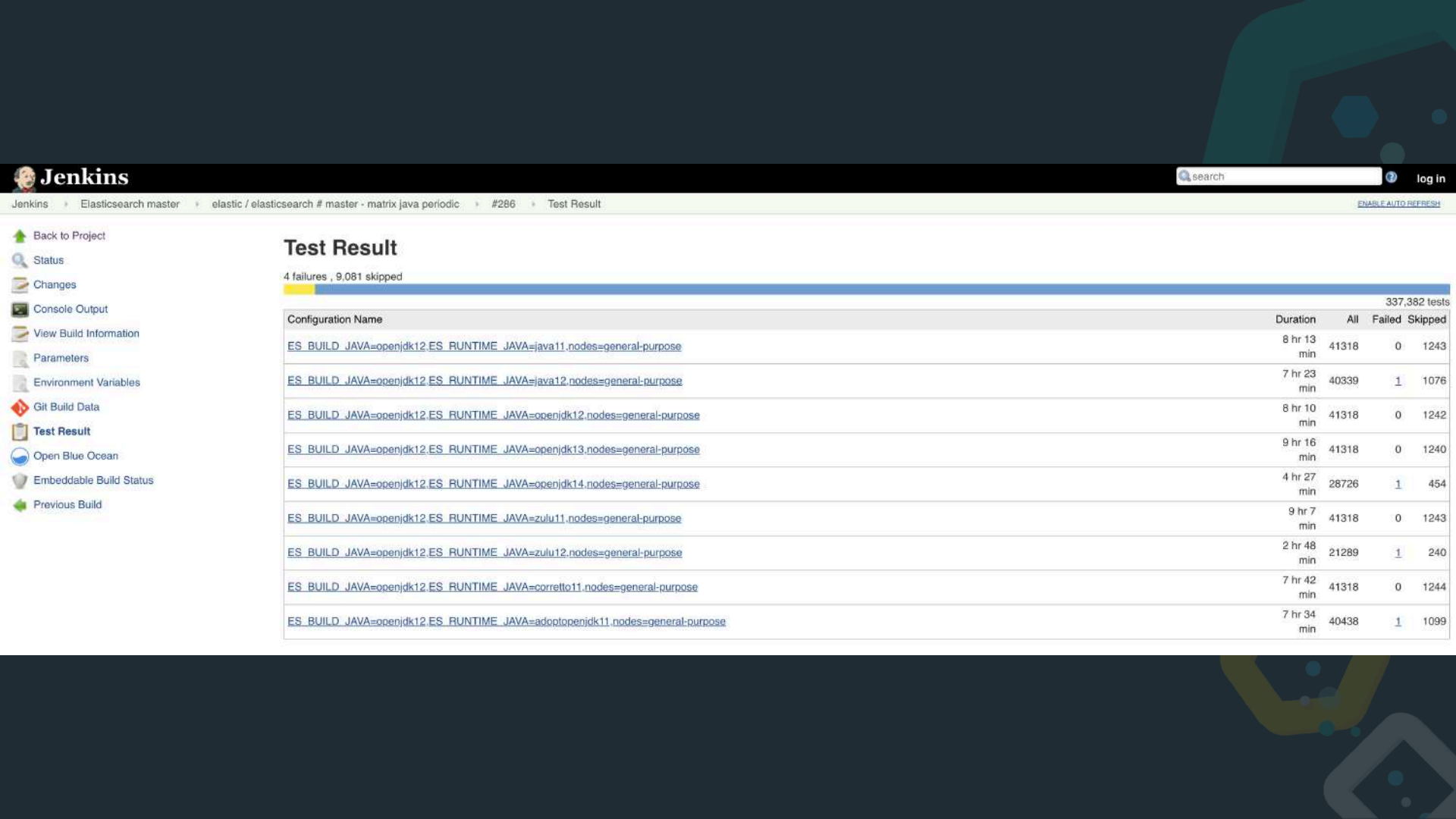
1 elastic / elasticsearch # 7.x plaform support matrix #229

elastic / elasticsearch # master - default distribution backwards compatibility matrix	2 hr 53 min - #237	2 days 10 hr - #230	17 min
elastic / elasticsearch # master - default-distro	3 hr 27 min - #429	9 days 19 hr - #400	17 min
elastic / elasticsearch # master - editor configs	4 min 58 sec - #2476	N/A	3 min 0 sec
elastic / elasticsearch # master - encryption at rest	5 hr 19 min - #208	2 days 17 hr - #203	1 hr 7 min
elastic / elasticsearch # master - g1gc	2 hr 2 min - #430	2 days 18 hr - #422	1 hr 0 min
elastic / elasticsearch # master - intake	1 hr 3 min - #1098	3 hr 12 min - #1094	43 min
elastic / elasticsearch # master - macrobenchmark - periodic - group - 1	15 hr - #171	7 days 15 hr - #164	13 hr
elastic / elasticsearch # master - macrobenchmark - periodic - group - 2	15 hr - #190	7 days 15 hr - #183	14 hr
elastic / elasticsearch # master - matrix java periodic	3 days 19 hr - #279	7 hr 44 min - #286	1 hr 9 min
elastic / elasticsearch # master - microbenchmark - periodic	10 hr - #143	N/A	1 hr 31 min
elastic / elasticsearch # master - oss-distro (docs)	5 hr 38 min - #428	2 days 13 hr - #421	11 min
elastic / elasticsearch # master - packaging tests	11 hr - #489	2 days 11 hr - #487	7 hr 4 min
elastic / elasticsearch # master - periodic	16 hr - #711	2 days 17 hr - #709	1 hr 0 min
elastic / elasticsearch # master - release tests	11 hr - #495	3 hr 33 min - #496	1 hr 6 min
elastic / elasticsearch # master - third party tests	2 hr 57 min - #162	28 days - #125	8 min 0 sec
elastic / elasticsearch # master packaging matrix	3 hr 25 min - #72	2 days 19 hr - #64	40 min
elastic / elasticsearch # master plaform support matrix	2 mo 10 days - #90	5 hr 59 min - #230	12 hr
elastic / elasticsearch # pull-request - default distro tests	30 min - #9411	36 min - #9410	18 min
elastic / elasticsearch # pull-request - docs check	5 hr 17 min - #3443	16 hr - #3441	9 min 5 sec
elastic / elasticsearch # pull-request - fwc	20 days - #7	N/A	1 min 29 sec
elastic / elasticsearch # pull-request - oss-distro docs	21 min - #11086	38 min - #11084	9 min 44 sec
elastic / elasticsearch # pull-request - packaging tests matrix	19 hr - #50	1 hr 5 min - #51	39 min
elastic / elasticsearch # pull-request - packaging tests sample matrix	47 min - #1383	38 min - #1385	34 min
elastic / elasticsearch # pull-request - precommit	3 mo 17 days - #19	4 mo 13 days - #4	8 min 13 sec
elastic / elasticsearch # pull-request-1	32 min - #9651	24 min - #9652	29 min
elastic / elasticsearch # pull-request-2	46 min - #9690	37 min - #9692	27 min
elastic / elasticsearch # pull-request-bwc	33 min - #9493	37 min - #9492	15 min

Icon: S M L

Legend Atom feed for all Atom feed for failures Atom feed for just latest builds


Jenkins
search
log in
Jenkins
Elasticsearch master
ENABLE AUTO REFRESH
People
Build History
Project Relationship
Check File Fingerprint
Open Blue Ocean
Filtered Build Queue
No builds in the queue.
Build Executor Status
master
1 Idle
2 Idle
3 Idle
4 Idle
5 Idle
6 Idle
7 Idle
8 Idle
9 Idle
10 Idle
11 Idle
12 Idle
13 Idle
14 Idle
15 Idle
elastic / elasticsearch # 7.4 - windows compatibility #112
elastic / elasticsearch # 7.5 - windows compatibility #18
elastic / elasticsearch # 7.x - unix compatibility #345
elastic / elasticsearch # 7.x - windows compatibility #213
elastic / elasticsearch # pull-
All
Docs
Elasticsearch
Elasticsearch 6.8
Elasticsearch 7.4
Elasticsearch 7.5
Elasticsearch 7.x
Elasticsearch Hadoop
Elasticsearch master
Lucene
Machine Learning
Main
S
W
Name ↓
Last Success
Last Failure
Last Duration
elastic / elasticsearch # master - backwards compatibility matrix
1 hr 58 min - #242
1 day 17 hr - #237
13 min
elastic / elasticsearch # master - branch consistency
4 hr 34 min - #144
12 days - #132
3 min 14 sec
elastic / elasticsearch # master - default distribution backwards compatibility matrix
3 hr 2 min - #237
2 days 11 hr - #230
17 min
elastic / elasticsearch # master - default-distro
3 hr 36 min - #429
9 days 19 hr - #400
17 min
elastic / elasticsearch # master - editor configs
13 min - #2476
N/A
3 min 0 sec
elastic / elasticsearch # master - encryption at rest
5 hr 27 min - #208
2 days 17 hr - #203
1 hr 7 min
elastic / elasticsearch # master - g1gc
2 hr 10 min - #430
2 days 18 hr - #422
1 hr 0 min
elastic / elasticsearch # master - intake
1 hr 11 min - #1098
3 hr 21 min - #1094
43 min
elastic / elasticsearch # master - macrobenchmark - periodic - group - 1
15 hr - #171
7 days 15 hr - #164
13 hr
elastic / elasticsearch # master - macrobenchmark - periodic - group - 2
15 hr - #190
7 days 15 hr - #183
14 hr
elastic / elasticsearch # master - matrix java periodic
3 days 19 hr - #279
7 hr 53 min - #286
1 hr 9 min
elastic / elasticsearch # master - microbenchmark - periodic
10 hr - #143
N/A
1 hr 31 min
elastic / elasticsearch # master - oss-distro (docs)
5 hr 46 min - #428
2 days 13 hr - #421
11 min
elastic / elasticsearch # master - packaging tests
11 hr - #489
2 days 11 hr - #487
7 hr 4 min
elastic / elasticsearch # master - periodic
17 hr - #711
2 days 17 hr - #709
1 hr 0 min
elastic / elasticsearch # master - release tests
11 hr - #495
3 hr 41 min - #496
1 hr 6 min
elastic / elasticsearch # master - third party tests
3 hr 5 min - #162
28 days - #125
8 min 0 sec
elastic / elasticsearch # master packaging matrix
3 hr 33 min - #72
2 days 19 hr - #64
40 min
elastic / elasticsearch # master plaform support matrix
2 mo 10 days - #90
6 hr 8 min - #230
12 hr
Icon: S M L
Legend
Atom feed for all
Atom feed for failures
Atom feed for just latest builds


Jenkins
search
log in
Jenkins › Elasticsearch master › elastic / elasticsearch # master - matrix java periodic › #286 › Test Result
ENABLE AUTO REFRESH
Back to Project
Status
Changes
Console Output
View Build Information
Parameters
Environment Variables
Git Build Data
Test Result
Open Blue Ocean
Embeddable Build Status
Previous Build
Test Result
4 failures , 9,081 skipped
337,382 tests
Configuration Name
Duration
All
Failed
Skipped
ES_BUILD_JAVA=openjdk12,ES_RUNTIME_JAVA=java11,nodes=general-purpose
8 hr 13 min
41318
0
1243
ES_BUILD_JAVA=openjdk12,ES_RUNTIME_JAVA=java12,nodes=general-purpose
7 hr 23 min
40339
1
1076
ES_BUILD_JAVA=openjdk12,ES_RUNTIME_JAVA=openjdk12,nodes=general-purpose
8 hr 10 min
41318
0
1242
ES_BUILD_JAVA=openjdk12,ES_RUNTIME_JAVA=openjdk13,nodes=general-purpose
9 hr 16 min
41318
0
1240
ES_BUILD_JAVA=openjdk12,ES_RUNTIME_JAVA=openjdk14,nodes=general-purpose
4 hr 27 min
28726
1
454
ES_BUILD_JAVA=openjdk12,ES_RUNTIME_JAVA=zulu11,nodes=general-purpose
9 hr 7 min
41318
0
1243
ES_BUILD_JAVA=openjdk12,ES_RUNTIME_JAVA=zulu12,nodes=general-purpose
2 hr 48 min
21289
1
240
ES_BUILD_JAVA=openjdk12,ES_RUNTIME_JAVA=corretto11,nodes=general-purpose
7 hr 42 min
41318
0
1244
ES_BUILD_JAVA=openjdk12,ES_RUNTIME_JAVA=adoptopenjdk11,nodes=general-purpose
7 hr 34 min
40438
1
1099

Project elastic / elasticsearch # master - Unix packaging tests matrix

Project name: elastic+elasticsearch+master+multijob+packaging-tests-unix-next
Packaging tests for the Elasticsearch master branch.

Configurations

centos-6-packaging centos-7-packaging debian-8-packaging debian-9-packaging debian-10-packaging fedora-29-packaging opensuse-15-1-packaging oraclelinux-6-packaging oraclelinux-7-packaging sles-12-packaging sles-15-packaging ubuntu-16.04-packaging ubuntu-18.04-packaging

Latest Test Result (no failures)

CI stats

- All active branches are tested
- Every pull request commit gets tested
- several thousand builds per day

Nightly benchmarks

Elasticsearch

We run benchmarks oriented on spotting performance regressions in metrics such as indexing throughput or garbage collection times.

Geonames

Indexing 11 million location documents and running various full text queries (match, function_score, ...) and aggregations.

Geopoint

Indexing 60 million location documents and running various geo-based queries (polygon, bounding box, distance, ...).

Percolator

Indexing 2 million AOL queries and running percolator queries against them.

PMC

Full text oriented benchmark measuring indexing performance and running queries and aggregations on a corpus of scientific papers.

NYC taxis

2015 taxi rides in New York measuring the performance for a large highly-structured data set.

Nested

Questions and answers from Stackoverflow measuring the performance for a nested data set.

HTTP logs

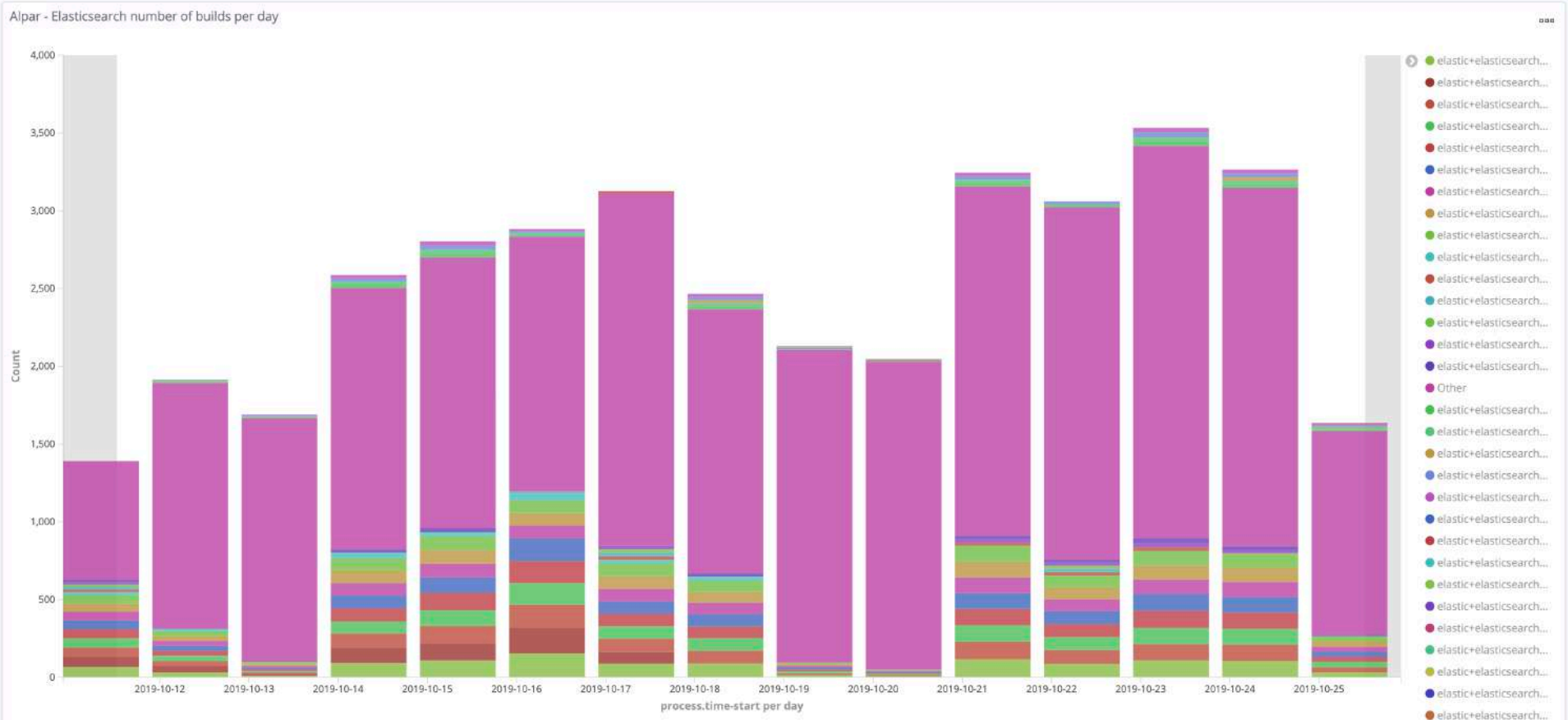
Web server logs from the 1998 football world cup to evaluate the performance for server logs.

NOAA

Weather data from NOAA measuring the performance of range fields.

Nightly benchmarks

CI stats


Alpar - Elasticsearch number of builds per day
Count
4,000
3,500
3,000
2,500
2,000
1,500
1,000
500
0
2019-10-12
2019-10-13
2019-10-14
2019-10-15
2019-10-16
2019-10-17
2019-10-18
2019-10-19
2019-10-20
2019-10-21
2019-10-22
2019-10-23
2019-10-24
2019-10-25
process.time-start per day
elastic+elasticsearch...
Other

Links

- https://elasticsearch-ci.elastic.co
- https://kibana-ci.elastic.co
- https://logstash-ci.elastic.co
- https://beats-ci.elastic.co
- https://benchmarks.elastic.co/
- https://github.com/elastic/rally

Release it!

Shipping products is

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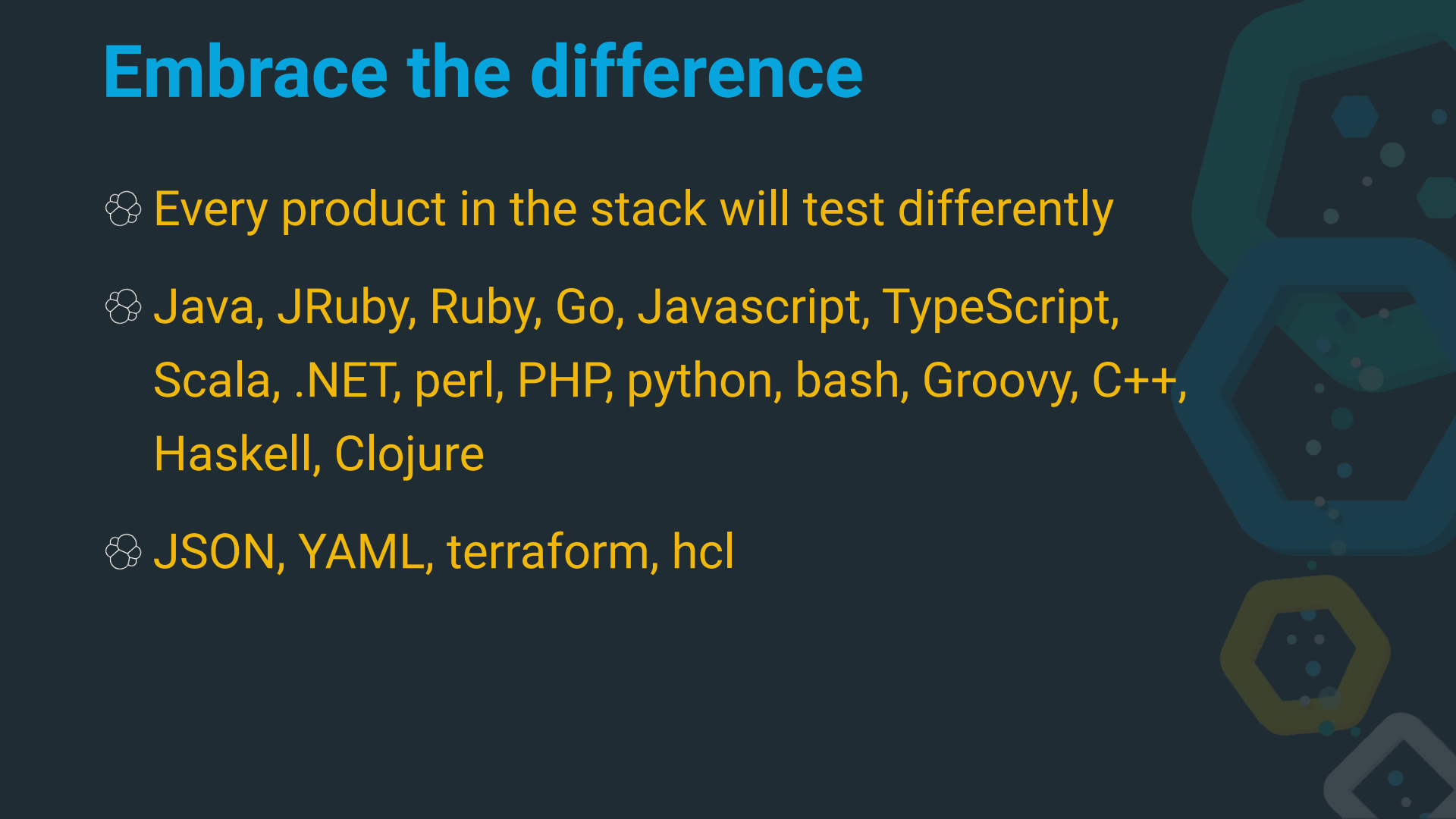
Embrace the difference

- Every product in the stack will test differently
- Java, JRuby, Ruby, Go, Javascript, TypeScript, Scala, .NET, perl, PHP, python, bash, Groovy, C++, Haskell, Clojure
- JSON, YAML, terraform, hcl



Everyone be ready!

- Releases are time based
- Every product's branch should be ready
- Build of release candidate artifacts
- Testing of these artifacts
- Repeat until done across products: Fix all blockers
- Releasing of those artifacts

Release manager

- A person responsible for the release
- Triggers the build of all artifacts
- Performs follow up tasks for each team after a release

Trust the process!

- Staged artifacts are the final release artifacts, no rebuilds!
- Push artifacts to their final destinations
- Official links, OSS sonatype, rubygems, docker images, package repositories

Trust the process!

- +200 artifacts are promoted to release bucket
- Using Tekton Pipelines instead of single process started on release manager machine
- promoting artifacts: 4x faster
- 3rd party promotion: 6x faster
- > 40 pods are doing a single release

More Work begins after releasing

- website
- communication
- release blog posts
- ensuring everything has been published

Support it!

Don't forget to phase out...

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Products have a lifecycle

- Stop supporting old products
- Be consistent with support guarantees
- Provide maintenance policy
- Distinguish between end of life & fixing bugs

Elastic product end of life dates

We love all our products, but sometimes we must say goodbye to a release so that we can continue moving forward on future development and innovation. Our End of Life policy defines how long a given release is considered supported, as well as how long a release is considered still in active development or maintenance. We provide more information about **support policy**, **platform support**, and **support SLAs** separately.

Summary

The upshot is that we support each major release of our products for 18 months from the General Availability date, and we actively maintain the last minor release of the two most recent major branches of Elasticsearch, and compatible releases of Kibana, Beats, and Logstash. The rest of this document describes this philosophy in more details and provides concrete examples. Tables at the bottom of this page detail maintenance schedule for each of our supported products.

Types of releases

Major versions, such as 1.0.0, 2.0.0, 5.0.0, 6.0.0, and 7.0.0, provide us with an opportunity to introduce features and break backwards compatibility. Minor versions, such as 7.1.0 and 7.2.0, provide us with an opportunity to introduce features. Maintenance releases, such as 7.1.1 and 7.1.2, fix bugs only. Maintenance activity occurs on all releases, but we focus on the minor release stream (e.g., 7.1.x) to define how long we maintain a particular code line. Active maintenance of a minor release implies that we are fixing bugs and backporting some number of fixes into that code branch.

Maintenance policy

Our goal is to maintain the most recent minor release from the current major release stream and the most recent minor release from the prior major release stream. We have observed that some users upgrade frequently and stay up to date with our release stream. These users can stay with the latest minor release stream and obtain fixes with the maintenance releases they choose to deploy. For example, these users would follow our Elasticsearch releases with 7.0.0, 7.0.1, 7.2.0, etc.

We know that not all users upgrade as quickly as we release. For these users, we maintain the last minor of the prior major release series. For example, with Elasticsearch 6.x, we are maintaining the 6.8.x series. This allows these users to obtain fixes while making only minor changes to their running software. This last minor will be maintained until the release of the second subsequent major version. For example, Elasticsearch 6.8.x will be maintained until the GA release of Elasticsearch 8.0.0. At the release of Elasticsearch 8.0.0, we will continue to maintain the last 7.x series, and begin maintaining the 8.0.x minor series, then 8.1.x series, then 8.2.x series of minor releases.

From time to time we may backport fixes to other minor release streams. For example, a very serious security bug might be ported to multiple branches. We will use our discretion in deciding to do this, but expect it to be very infrequent.

5.4.x	2018-11-04	5.5.0
5.5.x	2019-01-06	5.6.0
5.6.x	2019-03-11	7.0.0
6.0.x	2019-05-14	6.1.0
6.1.x	2019-06-13	6.2.0
6.2.x	2019-08-06	6.3.0
6.3.x	2019-12-13	6.4.0
6.4.x	2020-02-23	6.5.0
6.5.x	2020-05-14	6.6.0
6.6.x	2020-07-29	6.7.0
6.7.x	2020-09-26	6.8.0
6.8.x	2020-11-20	8.0.0
7.0.x	2020-10-10	7.1.0
7.1.x	2020-11-20	7.2.0
7.2.x	2020-12-25	7.3.0
7.3.x	2021-01-31	7.4.0
7.4.x	2021-04-01	7.5.0

Logstash forwarder

Logstash forwarder	EOL date	Maintained until
0.4.0	2016-11-07	Beats 1.0.0

Summary

Automate all the things!

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Summary

- Automate early, automate often
- Automate your tests, all of them
- Manual testing will still find bugs
- Automate your releases
- Ensure everyone can do a release
- Non-technical aspects are much harder to automate

Thanks for listening!

Questions?

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alex@elastic.co

elastic