



# Spectator to Participant. Contributing to Cassandra

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**Patrick McFadin**

Chief Evangelist for Apache Cassandra, DataStax

@PatrickMcFadin

Love open source



Not sure how to contribute



# Don't panic!



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Mirror of Apache Cassandra <http://cassandra.apache.org>

21,600 commits 9 branches 206 releases 181 contributors

Branch: trunk New pull request Create new file Upload files Find file Clone or download

carlyeks Merge branch 'cassandra-3.0' into trunk Latest commit 9895837 3 hours ago

bin Merge branch 'cassandra-3.9' into trunk a month ago

conf Add keep-alive to streaming a day ago

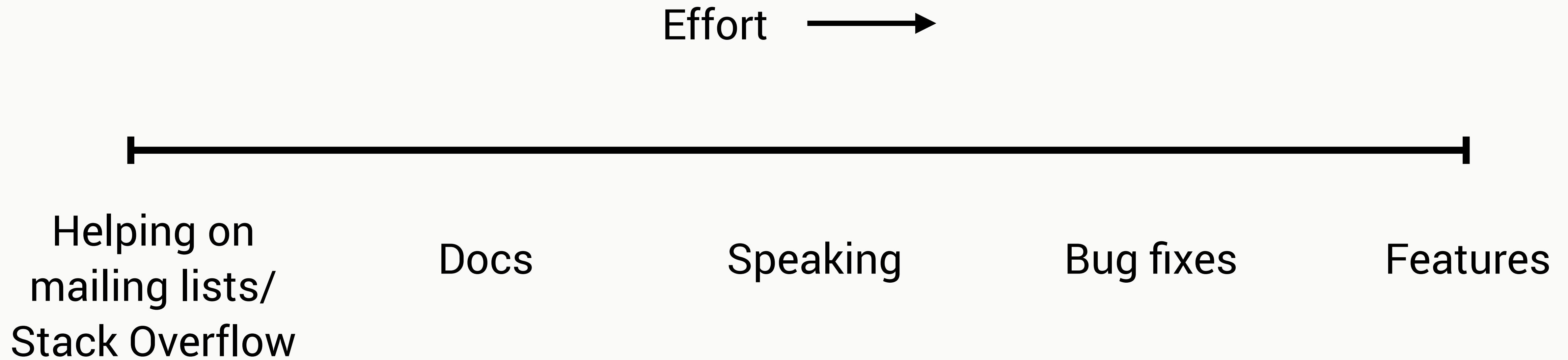
debian Update debian/changelog for 3.10 16 days ago

doc Ninja: actually commit images for IDE section of docs 2 days ago

examples Updated trigger example 10 months ago

ide Ninja, remove gen-thrift-java ant task from IntelliJ launch configs 13 days ago

# Contributions



# Mailing Lists



[user](#)

Thread

[Date](#)

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[Earlier messages](#)

## Messages by Thread

[Reading cassandra table using Spark](#) Selvam Raman

[Re: Reading cassandra table using Spark](#) DuyHai Doan

[What cipher suites are support in Cassandra 3.7 ?](#) Eric Ho

[Re: What cipher suites are support in Cassandra 3.7 ?](#) Nate McCall

[Is it possible to replay hints after running nodetool drain?](#) jerome

[Re: Is it possible to replay hints after running nodetool drain?](#) Matija Gobec

[Re: Is it possible to replay hints after running nodetool drain?](#) jerome

[Re: CASSANDRA-12278](#) Paulo Motta

[Return value of newQueryPlan](#) Siddharth Verma

[Re: Return value of newQueryPlan](#) Eric Stevens

[Re: Return value of newQueryPlan](#) Siddharth Verma

[what's next after adding 3 new nodes not as the steps of "Starting multiple new nodes"?](#) Dillon Peng

[Re: what's next after adding 3 new nodes not as the steps of "Starting multiple new nodes"?](#) Jeff Jirsa

[cassandra schema initialization in docker](#) Vova Shelgunov

[Re: cassandra schema initialization in docker](#) Michael Mior

[Re: cassandra schema initialization in docker](#) Vova Shelgunov

[Re: cassandra schema initialization in docker](#) Michael Mior

[Re: cassandra schema initialization in docker](#) Vova Shelgunov

[Re: cassandra schema initialization in docker](#) Michael Mior

[Re: cassandra schema initialization in docker](#) Jonathan Haddad

[Re: cassandra schema initialization in docker](#) Vova Shelgunov

[Re: cassandra schema initialization in docker](#) Patrick McFadin

[Re: cassandra schema initialization in docker](#) Vova Shelgunov

[Re: cassandra schema initialization in docker](#) Patrick McFadin

[nodetool repair uses option '-local' and '-pr' togather](#) Li, Guangxing

[Re: nodetool repair uses option '-local' and '-pr' togather](#) Paulo Motta

[Re: nodetool repair uses option '-local' and '-pr' togather](#) Li, Guangxing

[Re: nodetool repair uses option '-local' and '-pr' togather](#) Paulo Motta

[ServerError: An unexpected error occurred server side; in cassandra java driver](#) Siddharth Verma

[Re: ServerError: An unexpected error occurred server side; in cassandra java driver](#) Ben Slater

user@cassandra.apache.org

## Tagged Questions

info

newest

1 featured

frequent

votes

active

unanswered

Cassandra is a highly scalable, eventually consistent, distributed, structured row/column store.

[learn more...](#) [improve tag info](#) [top users](#) [synonyms \(1\)](#)

0

votes

0

answers

10 views

## [Cassandra select rows based on date range](#)

This is my scenario, I have table business which has following columns, code,name,description,datetime.  
Now I need to show code and name of those business records which has datetime greater than ...

[cassandra](#) [date-range](#) [cql3](#)

asked 20 hours ago



Ani

1

-1

votes

0

answers

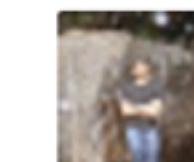
12 views

## [Cassandra Cluster manager memory leaks](#)

We have spring boot application with spring cassandra, application crashes due to OOM for every 2 to 3 days, we need to restart the application for it to work again. We have taken heap dump, when we ...

[java](#) [memory-leaks](#) [cassandra](#) [spring-data-cassandra](#)

asked yesterday

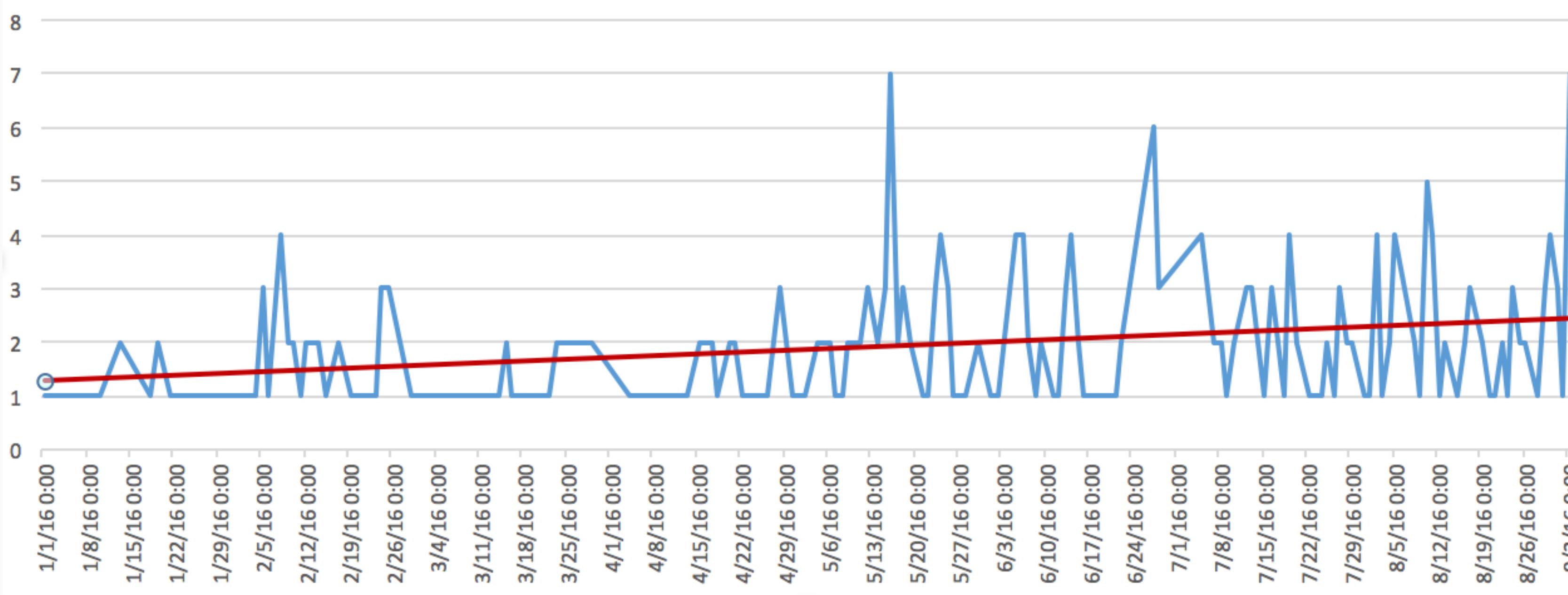


Guru Praveen

1

# Stack Overflow

## Questions per day for 2016



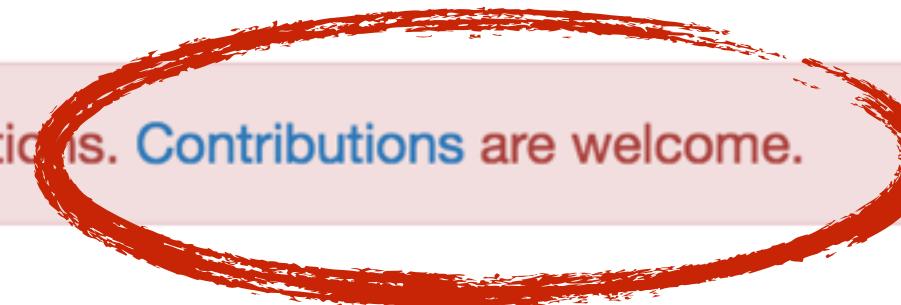
## Top Answerers

	jbellis	18k	1	28	37
	Aaron	20.6k	5	36	70
	Lyuben Todorov	11.6k	4	31	61
	RussS	9,578	12	32	
	Richard	7,818	2	24	26



# Apache Cassandra Documentation v3.7

This documentation is currently a work-in-progress and contains a number of TODO sections. Contributions are welcome.



## Main documentation

### [Getting started](#)

Newbie friendly starting point

### [Cassandra Architecture](#)

Cassandra's big picture

### [Data Modeling](#)

Or how to make square pegs fit round holes

### [Cassandra Query Language](#)

CQL reference documentation

### [Operating Cassandra](#)

The operator's corner

### [Cassandra's Tools](#)

cqlsh, nodetool, ...

### [Troubleshooting](#)

What to look for when you have a problem

### [Cassandra Development](#)

Learn how to improve Cassandra and contribute patches

[Code](#)[Pull requests 13](#)[Pulse](#)[Graphs](#)Branch: [trunk](#) ▾[cassandra / doc /](#)[Create new file](#)[Upload files](#)[Find file](#)[History](#) thobbs Ninja: actually commit images for IDE section of docs [...](#)Latest commit [7ea727c](#) 6 days ago

..

[cql3](#)

Add support for GROUP BY to SELECT statement

a month ago

[source](#)

Ninja: actually commit images for IDE section of docs

6 days ago

[Makefile](#)

Add theme for inclusion of the documentation on the website

a month ago

[README.md](#)

Add initial in-tree documentation (very incomplete so far)

3 months ago

[SASI.md](#)

SASI index options validation

7 months ago

[convert\\_yaml\\_to\\_rst.py](#)

Initial FAQ section

2 months ago

[make.bat](#)

Add initial in-tree documentation (very incomplete so far)

3 months ago

[native\\_protocol\\_v3.spec](#)

Correct section number of opcode section in protocol spec

3 months ago

[native\\_protocol\\_v4.spec](#)

Merge branch 'cassandra-2.2' into cassandra-3.0

18 days ago

[native\\_protocol\\_v5.spec](#)

Add error code map to read/write failure responses

16 days ago

# Blog post

DATASTAX

## TUNING CASSANDRA @ TARGET

02 Sep 2014 in Infrastructure • 8 minutes read

We have been using Cassandra in production for about a year now.

We use it to serve up product and inventory information through our Products API. Currently, we have a 12-node Cassandra cluster. Each node is a physical server with a 24-core processor, 400gb RAM, and 12 SSD hard drives.



[Keen IO's High-Performance Analytics API Powered by Apache Cassandra](#)

January 29th, 2014



"Eventually, we needed to scale beyond a single-master system, and we chose Cassandra for its linear scalability and relative ease of operation."

— Josh Dzielak, VP of Engineering, Keen IO



Josh Dzielak VP of Engineering at [Keen IO](#)

[Keen IO](#)

We are a hosted, API-driven analytics backend-as-a-service. Customers use our modern, developer-

# Speaking



- Big Events
- Small Events
- Nervous? Talk to us

# Code

# Can I contribute to an open source project?





Mmm yeah. We just use  
OSS.

Risk to the Business →



Helping on  
mailing lists

Docs

Bug fixes

Features

# Contribution License Agreements

- Used by open source projects
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# Proprietary Information Agreement



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- aka Non-Disclosure Agreement
- Tailor for OSS contributions
- Everyone is protected





# Cassandra

Key: CASSANDRA · Lead:  Jonathan Ellis · Category: Cassandra · URL: <http://cassandra.apache.org/>

[Summary](#)[Issues](#)[Road Map](#)[Change Log](#)[Reports](#)[Versions](#)[Components](#)[Source](#)[Reviews](#)

## Issues

[All issues](#)[Unresolved](#)[Added recently](#)[Resolved recently](#)[Updated recently](#)[Assigned to me](#)[Reported by me](#)[Unscheduled](#)[Outstanding](#)

### Unresolved: By Priority

#### Priority

#### Issues

#### Percentage

 Blocker

5

|

 Critical

15

1%

 Major

771

59%

 Minor

493

37%

 Trivial

32

2%

[View Issues](#)

### Status Summary

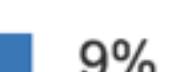
#### Status

#### Issues

#### Percentage

[Open](#)

1174

 9%[In Progress](#)

35

|

[Reopened](#)

32

|

[Resolved](#)

11203

 89%[Patch Available](#)

57

|

[Testing](#)

1

|

dev

Thread

Date

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[Earlier messages](#)**Messages by Thread**[Failing tests 2016-09-02](#) Joel Knighton[CASSANDRA-12278](#) Andy Cobley[Re: CASSANDRA-12278](#) Paulo Motta[Re: CASSANDRA-12278](#) Michael Shuler[Re: CASSANDRA-12278](#) Andy Cobley[Failing tests 2016-09-01](#) Joel Knighton[Gossip 2.0](#) Jason Brown[Re: Gossip 2.0](#) Eric Evans[Re: Gossip 2.0](#) Jeremiah D Jordan[Failing tests 2016-08-31](#) Joel Knighton[Help requested: o.a.c.cql3.validation unit tests periodically hang](#) Michael Shuler[Re: Help requested: o.a.c.cql3.validation unit tests periodically hang](#) Michael Shuler[Re: Help requested: o.a.c.cql3.validation unit tests periodically hang](#) Benjamin Lerer[CQL Collections appear slow](#) Ben Frank[Re: CQL Collections appear slow](#) Tyler Hobbs[Re: CQL Collections appear slow](#) Ben Frank[Re: CQL Collections appear slow](#) Tyler Hobbs[Failing tests 2016-08-30](#) Joel Knighton[ApacheCon Seville CFP closes September 9th](#) Rich Bowen[Failing tests 2016-08-29](#) Joel Knighton[Proposal: create a mailing list for just the newly created Jira ticket notifications](#) Jeremy Hanna

Jonathan Haddad

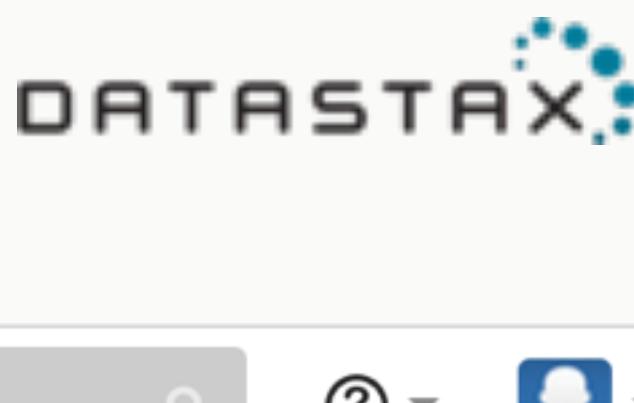
Russell Hatch

Jonathan Haddad

Patrick McFadin

[in-tree 'Cassandra Development' docs](#) mck[Re: in-tree 'Cassandra Development' docs](#) Aleksey Yeschenko[Re: in-tree 'Cassandra Development' docs](#) Mick Semb Wever[Failing tests 2016-08-26 \[cassandra-3.9\]](#) Joel Knighton

# Bug fixes



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## Open Bugs

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Cassandra ▾ Bug ▾ Open ▾ Assignee: All ▾ Contains text More Advanced

1–50 of 322 Columns ▾

T	Patch Info	Key	Summary
<input checked="" type="checkbox"/>		CASSANDRA-12607	The cassandra commit log corrupted by restart even if no write operations in hours
<input checked="" type="checkbox"/>		CASSANDRA-12606	CQLSSTableWriter unable to use blob conversion functions
<input checked="" type="checkbox"/>		CASSANDRA-12605	Timestamp-order searching of sstables does not handle non-frozen UDTs, frozen collections correctly
<input checked="" type="checkbox"/>		CASSANDRA-12604	ALTER TABLE is missing RENAME instruction
<input checked="" type="checkbox"/>		CASSANDRA-12603	ALTER TABLE's DROP has superfluous column_name
<input checked="" type="checkbox"/>		CASSANDRA-12598	BailErrorStragery alike for ANTLR grammar parsing
<input checked="" type="checkbox"/>		CASSANDRA-12596	cosmetic issue with compaction-stress write
<input checked="" type="checkbox"/>		CASSANDRA-12595	Exception (java.lang.IllegalStateException) encountered during startup: One row required, 0 found
<input checked="" type="checkbox"/>		CASSANDRA-12594	sstabledump fails on frozen collection cells
<input checked="" type="checkbox"/>		CASSANDRA-12590	Segfault reading secondary index

# New Feature?

- Create a Jira discussing the feature you want to contribute
- Kick off a discussion in dev@
- Create a new feature branch locally
- Code, code, code

[Search docs](#)[Getting Started](#)  
[Architecture](#)  
[Data Modeling](#)  
[The Cassandra Query Language \(CQL\)](#)  
[Configuring Cassandra](#)  
[Operating Cassandra](#)  
[Cassandra Tools](#)[Troubleshooting](#)  
[Cassandra Development](#)[Building and IDE Integration](#)  
[Testing](#)  
[Contributing Code Changes](#)

# Review Checklist

When reviewing tickets in Apache JIRA, the following items should be covered as part of the review process:

## General

- Does it conform to the [Code Style](#) guidelines?
- Is there any redundant or duplicate code?
- Is the code as modular as possible?
- Can any singletons be avoided?
- Can any of the code be replaced with library functions?
- Are units of measurement used in the code consistent, both internally and with the rest of the ecosystem?

## Error-Handling

- Are all data inputs and outputs checked (for the correct type, length, format, and range) and encoded?
- Where third-party utilities are used, are returning errors being caught?
- Are invalid parameter values handled?
- Are any `Throwable`/Exceptions passed to the `JVMStabilityInspector`?

**SPACES INSTEAD OF**

**TABS!**



# Submitting your work

## Creating a Patch

So you've finished coding and the great moment arrives: it's time to submit your patch!

1. Create a branch for your changes if you haven't done already. Many contributors use a feature branch for each patch. If you're using git, you can do this by running `git checkout -b 12345-3.0`. You can also use the `git checkout -b 12345-3.0` command to switch to an existing branch or create a new one.
2. Verify that you follow Cassandra's [Code Style](#)
3. Make sure all tests (including yours) pass using ant as described in [Testing](#). If you're using git, you can run `ant test` to run the tests. It may be useful to check the test's status by searching the issue tracker or looking at the build logs. Note that the full test suites take many hours to complete, so it is common to only run the tests that are relevant to your patch. Once a patch has been uploaded, the reviewer or committer can help speed up the review process.
4. Consider going through the [Review Checklist](#) for your code. This will help you prepare your patch for inclusion.
5. Don't make the committer squash commits for you in the root branch either. Never squash commits in the root branch during the review stage, especially for incremental review, but once +1d, do either:

- For now it's git patch and attach to a Jira ticket.
- Coming soon, direct through github!

# Thank you!

Questions?

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