



**MONGODB**

**BUG**

**HUNT**

---

# PREPARING YOUR TOOLS FOR THE HUNT

- ▶ MongoDB issue tracking (JIRA)
- ▶ How to file a bug
- ▶ How to test MongoDB
- ▶ The hunting grounds - what's new in 3.4
- ▶ The 3.4 schedule

---

# MONGODB ISSUE TRACKING (JIRA)

- ▶ All MongoDB work is tracked through JIRA
- ▶ <https://jira.mongodb.org>
- ▶ SERVER, TOOLS, DOCS and DRIVERS projects are public
- ▶ Need an account to create tickets and comment

---

# THE SERVER PROJECT

- ▶ Used to track all server, shell, and mongos development
- ▶ Open a ticket in this project if you find a bug
- ▶ This project is **not for questions**
- ▶ Use the mongodb-user group instead
- ▶ <https://groups.google.com/group/mongodb-user>

---

# USING JQL TO NAVIGATE JIRA

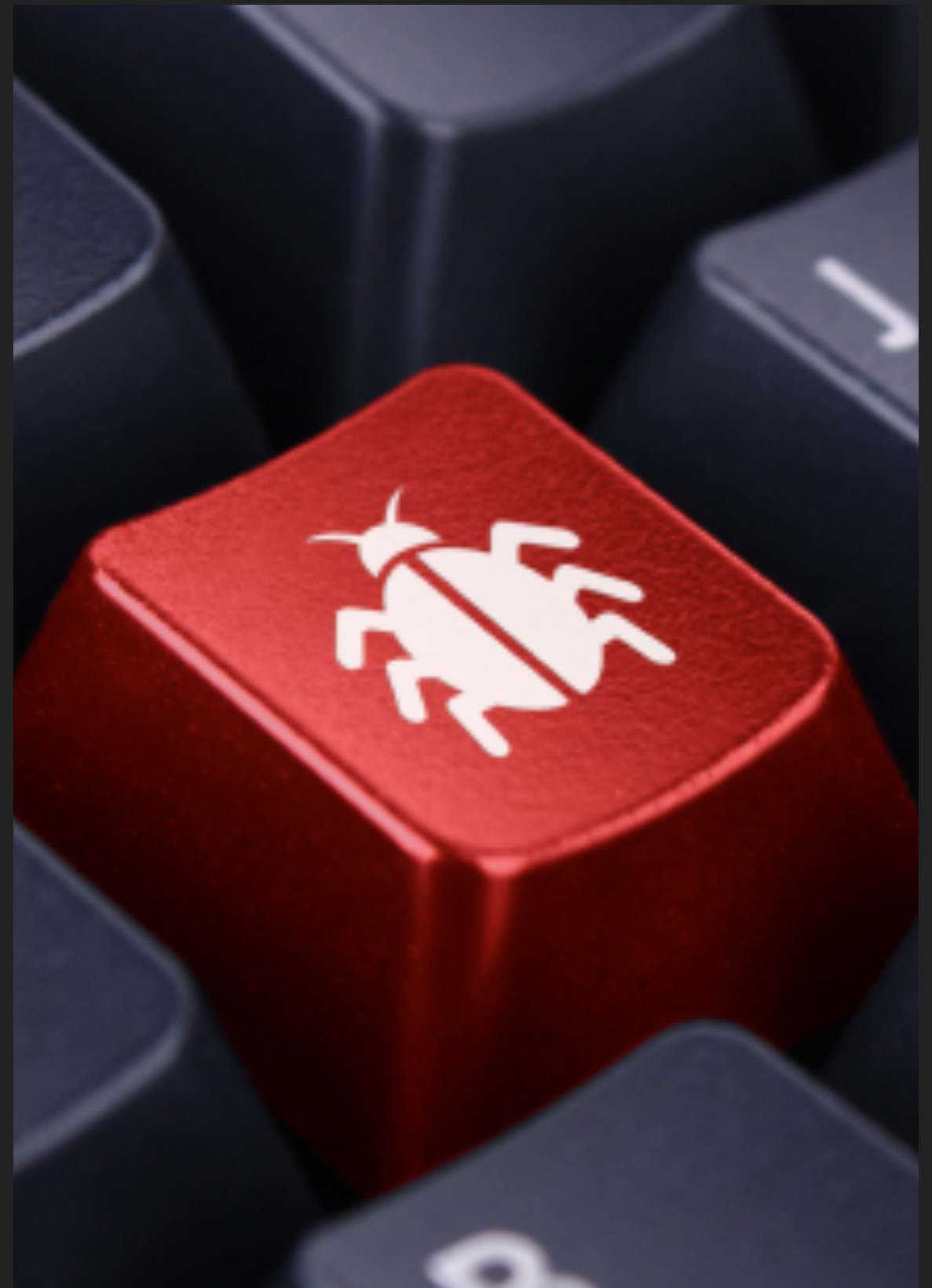
## USE JQL TO FIND ISSUES FASTER:

- ▶ `_project = SERVER` and `resolution is empty` and `summary ~ "collation" _`
- ▶ `_project = DOCS` and `fixVersion = "mongodb-3.4"` and `resolution is empty _`
- ▶ `_project = SERVER` and `affectsVersion >= 3.4.0-rc0` and `resolution is empty _`

---

# HOW TO FILE A BUG

I'VE FOUND A BUG, WHAT  
DO I DO NOW?







---

# TRY TO ANSWER THESE QUESTIONS

- ▶ **WHAT**

- ▶ Slow queries, unexpected query results, etc.

- ▶ **WHERE**

- ▶ Primary, secondary, client application

- ▶ **WHEN**

- ▶ Specific times of the day, all the time, after an event

- ▶ **HOW MUCH**

- ▶ What's the impact and/or observable behavior





# printSlaveReplicationInfo() appears broken in master

Edit

Comment

Assign

More ▾

Re-Open Issue

Quiet Edit

Admin ▾

Export ▾

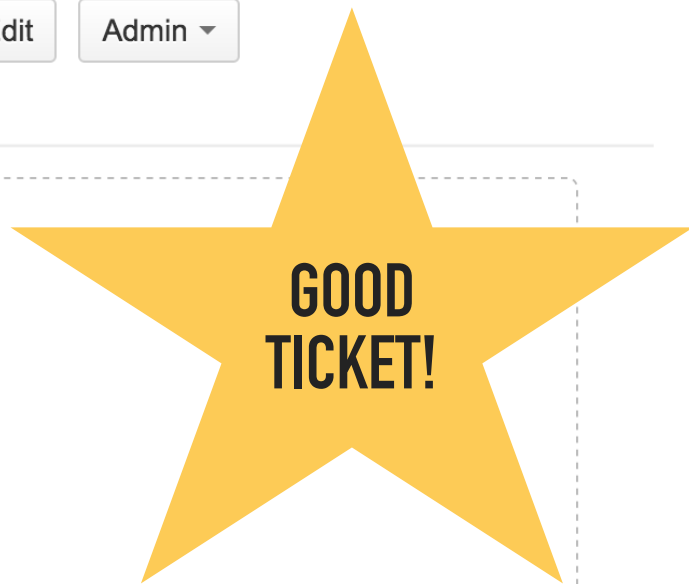
## Description

```
$ mongo
MongoDB shell version: 2.8.0-rc6-pre-
connecting to: test
Server has startup warnings:
2015-01-20T13:29:54.274-0500 I CONTROL [initandlisten]

replset:PRIMARY> db.foo.insert({x:1})
WriteResult({ "nInserted" : 1 })

replset:PRIMARY> rs.printSlaveReplicationInfo()
source: tab:27018
  syncedTo: Tue Jan 20 2015 13:30:25 GMT-0500 (EST)
  -3630749425 secs (-1008541.51 hrs) behind the freshest member (no primary available at the moment)
source: tab:27019
  syncedTo: Tue Jan 20 2015 13:30:25 GMT-0500 (EST)
  -3630749425 secs (-1008541.51 hrs) behind the freshest member (no primary available at the moment)

replset:PRIMARY> db.serverBuildInfo()
{
  "version" : "2.8.0-rc6-pre-",
```



## Dates

Created:	Jan 20 2015 01:32:01 PM GMT-0500
Updated:	Jan 23 2015 06:35:29 PM GMT-0500
Resolved:	Jan 20 2015 05:00:58 PM GMT-0500
Days since reply:	1 year, 32 weeks, 6 days ago
Date of 1st Reply:	Jan 20 2015 02:27:37 PM GMT-0500

## Private Fields

Documentation	Not Needed
Changes:	
Driver Changes:	Not Needed

## comment-role

## Agile

[View on Board](#)

## Reporter

name:	ramon.fernandez
email:	ramon.fernandez@mongodb.com
CS:	<a href="#">10gen-eng</a> , <a href="#">10gen</a>

## Group

## Links

MongoDB - Support Dashboard	<a href="#">Cloud Group</a> / <a href="#">open issues</a> / <a href="#">all issues</a> / <a href="#">clienthub</a>
-----------------------------	--

## Activity

All

Comments

History

▼ [Ramon Fernandez](#) added a comment - Jan 20 2015 01:35:37 PM GMT-0500 - **edited**

Reverting <https://github.com/mongodb/mongo/commit/57806db0234321b9b88a74e013d952104e0c459a> from [SERVER-16793](#) restores proper behavior.

---

# WHAT TO INCLUDE

- ▶ A session transcript
- ▶ A shell reproducer in JavaScript is best
- ▶ A reproducer in other language helps too
- ▶ Logs for all affected nodes
- ▶ Contents of the `diagnostic.data` directory
- ▶ MongoDB server/driver/platform versions



# Removing objects from under a geo \$near query causes invalid memory access

- Edit
- Comment
- Assign
- More
- Re-Open Issue
- Quiet Edit
- Admin

Export

Operating System:  
Steps To Reproduce:

ALL

```
t = db.geo_near
t.drop();

for (var x = -1; x < 1; x += 1) {
  for (var y = -1; y < 1; y += 1) {
    t.insert({geo: [x, y]})
  }
}

t.ensureIndex({ geo : "2d" })

var cur = t.find({geo: {$near: [0,0], $maxDistance: 3}}).batchSize(2);
cur.next();
cur.next();
t.remove({})
cur.next();
```



Watchers: 7 Stop watching this issue

Dates	
Created:	Jan 20 2015 02:37:17 PM GMT-0500
Updated:	Jan 23 2015 06:35:27 PM GMT-0500
Resolved:	Jan 22 2015 12:18:59 AM GMT-0500
Days since reply:	1 year, 32 weeks, 5 days ago
Date of 1st Reply:	Jan 20 2015 05:30:06 PM GMT-0500

Private Fields	
Documentation Changes:	Not Needed
Driver Changes:	Not Needed

comment-role

Agile  
[View on Board](#)

Reporter

name:	charlie.swanson
email:	charlie.swanson@mongodb.com
CS:	<a href="#">10gen</a> , <a href="#">10gen-eng</a>

Description

It seems like the GEO\_NEAR\_2D stage fails to realize when an object is removed from under it, see repro below. This only causes a failure on an MMAPV1 Node, no issues on a wiredTiger node, or a 2.6.6 node. Log attached.

Attachments			+	▼
<a href="#">mongod.log</a>	10 kB	Jan 20 2015 02:37:17 PM GMT-0500		

Activity

Group	Links
-------	-------



# IS THIS A BUG?

## MONGODB IS FULL OF SURPRISES!

- ▶ A certain behavior may be expected
- ▶ Ask in the **mongodb-user** group
- ▶ Same guidelines about asking good questions apply
- ▶ A bug in the documentation is still a bug
- ▶ File a detailed report in the DOCS project



# GET READY FOR THE HUNT

- ▶ Download the server
- ▶ [www.mongodb.com/download-center](http://www.mongodb.com/download-center)
- ▶ Use 3.3.13, or the latest 3.4.0-rcN
- ▶ Write your tests in a file
- ▶ Use the shell
- ▶ `mongo < mytest.js`



---

# MORE ADVANCED TESTING

- ▶ Use an existing dataset
- ▶ <https://www.citibikenyc.com/system-data>
- ▶ Use **mtools** for more advanced setups
- ▶ Replica sets
- ▶ Sharded clusters
- ▶ <https://github.com/rueckstiess/mtools>
- ▶ See the **jstests** for black-belt testing
- ▶ [github.com/mongodb/mongo/tree/master/jstests](https://github.com/mongodb/mongo/tree/master/jstests)

---

# MONGODB 3.4



***New & Improved***





---

# TONS OF FOUNDATIONAL WORK

- ▶ Shard zones support
- ▶ Faster auto-balancing
- ▶ Intra-cluster compression
- ▶ Robust initial sync
- ▶ New architecture support

---

# LOTS OF USER-FACING FEATURES

- ▶ Read-only views
- ▶ Graph lookup
- ▶ Collation support
- ▶ Decimal support
- ▶ Aggregation improvements
- ▶ Faceted search

---

# THE 3.4 SCHEDULE

- ▶ MongoDB 3.4 is scheduled for publication before the end of the year
- ▶ We'll be releasing "Release Candidates" until then
  - ▶ e.g.: 3.4.0-rc3
- ▶ All bugs submitted between now and the 3.4.0 release are eligible to win the Bug Hunt
- ▶ Amazing prizes await our fearless Bug Hunters!

---

# SUMMARY

- ▶ The SERVER project tracks bugs and feature requests
- ▶ SERVER, TOOLS, DOCS, DRIVERS
- ▶ Help us help you: ask good questions
- ▶ Easiest way to test is through the shell
- ▶ Start with user-facing features

---

# THE PRIZES

## FIRST PRIZE

- ▶ \$1,500 Amazon Gift Card
- ▶ Complimentary admission to MongoDB World or MongoDB Europe
- ▶ 2 Professional Certification exam vouchers
- ▶ Recognition on our blog and in social media

## HONORABLE MENTIONS

- ▶ \$500 Amazon Gift Card
- ▶ Complimentary admission to MongoDB World or MongoDB Europe
- ▶ 1 Professional Certification exam voucher
- ▶ Recognition on our blog and in social media

**QUESTIONS?**



## RESOURCES

- ▶ [github.com/ramonfm/MUG201609](https://github.com/ramonfm/MUG201609)
- ▶ [mongodb.com/download-center](https://mongodb.com/download-center)
- ▶ [docs.mongodb.com/manual/release-notes/3.3-dev-series/](https://docs.mongodb.com/manual/release-notes/3.3-dev-series/)