

BlueBRIDGE - Support #3811

Statistical manager refuses connection

Apr 27, 2016 10:59 PM - Kostas Hirikakis

Status: Closed	Start date: May 06, 2016
Priority: Urgent	Due date:
Assignee: _InfraScience Systems Engineer	% Done: 100%
Category:	Estimated time: 0.00 hour
Infrastructure:	
Description Testing the Statistical Manager. Test from the tutorial . We are using portal bundle 4.0.0-SNAPSHOT with tomcat 7.0.62. 1. starting tomcat 2. launching a servlet (see catalina.out#415). The servlet is just invoking TestStatistical's main (SimulMedium.java#58). TestStatistical is an exact copy from the tutorial. 3. At catalina.out#623 it says that we received a map. 4. At catalina.out#630 it says "current scope found(ScopeProvider): /gcube/devsec/devVRE" which is correct 5. At catalina.out#667 there is a mongo pooled connection and at #670 it cannot open it (connection refused) Notes: 1. Running wget -qO- http://ipecho.net/plain we get 193.92.78.53, which is the ip address we already gave you to register. 2. The eclipse project is attached. It is only a servlet wrapper for TestStatistical 3. The full tomcat log is attached	
Subtasks: Support # 3911: Allow static ip to access mongodb server	Closed
Related issues: Related to gCube - Support # 4136: Cannot access mongo database server	Closed May 26, 2016

History

#1 - Apr 27, 2016 11:11 PM - Andrea Dell'Amico

- Assignee changed from _InfraScience Systems Engineer to Panagiota Koltsida

#2 - Apr 30, 2016 12:53 PM - Kostas Hirikakis

- File tomcat_logs.tar.gz added

i2s troubleshot this with [@fabio.sinibaldi@isti.cnr.it](mailto:fabio.sinibaldi@isti.cnr.it) via email. Since support has been moved here and the assignee changed, we will continue here.

Fabio's last response was at 28/4:

*Hi Kostas,
well, the good news is that actually it's not the same error.
On the previous logs you had
com.mongodb.MongoSocketOpenException: Exception opening socket
but now you have
com.mongodb.MongoSocketReadTimeoutException: Timeout while receiving message.

We checked our logs and it seems that messages are correctly received by mongo instances, thus the problem might be that somehow you cannot receive the response. It might be because you're behind a firewall which block receiving messages on some ports.
Could you investigate on your side about that possibility?
The port used should be 27017.

Fabio*

We added simple [http-get code](#) just before invoking TestStatistical.main. As you can see at the attached logs at catalina.out#365-397, the app invokes the server at port 27017 and consumes the output just fine. Our target server [1] serves html rather than mongo but that doesn't affect the port issue: our gcube portal can receive messages at 27017 (or any other port, as we tested some random ones).

How we should proceed?

[1] dummy target server: a simple iis server behind a router. The router listens to port 27017 and redirects to iisserver:80. The router is at another ISP network.

#3 - Apr 30, 2016 01:10 PM - Kostas Hirikakis

- Status changed from New to In Progress

#4 - Apr 30, 2016 03:53 PM - Panagiota Koltsida

- Assignee changed from Panagiota Koltsida to Fabio Sinibaldi

#5 - May 02, 2016 10:59 AM - Fabio Sinibaldi

- Assignee changed from Fabio Sinibaldi to Roberto Cirillo

#6 - May 02, 2016 04:04 PM - Roberto Cirillo

@kostashirikakis@i2s.gr this is very strange. The same code works properly from my machine. Please, could you reproduce this issue? We are going to dump the tcp connection.

#7 - May 04, 2016 09:04 AM - Kostas Hirikakis

- File tomcat_logs.tar.gz added

In case you need a marked execution, this one ran at 4 May 2016, 8:40 [CET](#).

#8 - May 04, 2016 03:02 PM - Roberto Cirillo

Thank you Kostas.

From mongodb log I see

```
2016-05-04T08:39:54.456+0200 | NETWORK [initandlisten] connection accepted from 193.92.78.53:55652 #1884081
```

where 55652 is the client's port. Every client has to use a different port and its assigned by the os. This morning your client has tried to receive data from the following ports:

```
27017 > 55643
27017 > 55646
27017 > 55648
27017 > 55650
27017 > 55652
```

I guess you are not able to receive data from these ports. Could you try to set the port of your target server to 55643 and retry your test, please?

#9 - May 04, 2016 09:23 PM - Kostas Hirikakis

- File *tomcat_logs.tar.gz* added

- File *netstat.out.tar.gz* added

I guess you are referring to the client tcp ports assigned during the communication. I am attaching the output of the

`netstat -all -c`

command. The capture started just before launching tomcat and stopped right after the connection timed out. I included everything so you can filter out as necessary.

I am also attaching tomcat logs, just in case.

#10 - May 05, 2016 02:59 PM - Roberto Cirillo

- % *Done* changed from 0 to 100

- *Status* changed from *In Progress* to *Feedback*

Kostas Hirikakis wrote:

I guess you are referring to the client tcp ports assigned during the communication. I am attaching the output of the

Yes, I'm referring to the client tcp port assigned by your os.

From your netstat I see the following:

```
tcp    0  59 192.168.1.112:58042  146.48.123.72:27017  ESTABLISHED
```

where "146.48.123.72" is our mongodb server and "192.168.1.112" is your local address.

While in mongodb server log I see:

```
2016-05-04T19:45:32.460+0200 | NETWORK [initandlisten] connection accepted from 193.92.78.53:58042 #1894689
```

but your ip address is not the same: from mongodb I see "193.92.78.53", from your netstat I see "192.168.1.112".

So, I guess it is your fw or your nat system that doesn't correctly manage the connection on that port and reset the connection. We cannot do anything about this by our side.

In attachment the tcp connection flow.

#11 - May 05, 2016 02:59 PM - Roberto Cirillo

- File tcpFlow.log added

#12 - May 06, 2016 02:37 PM - Kostas Hirikakis

- Status changed from Feedback to In Progress

The sample project ran from a portal hosted at 195.134.66.105 produced the [same problem](#). The ip is allowed to access the MongoDB server and (luckily) it is not behind any router.
Please advise.

#13 - May 09, 2016 02:55 PM - Roberto Cirillo

- Status changed from In Progress to Closed

I'm going to close this ticket. We have to try with the new ip, if the problem is the same we have to find a workaround for this issue, if possible.

#14 - May 09, 2016 03:28 PM - Tommaso Piccioli

The behavior is always the same, after the first correct handshake for the tcp connection there is a reset of the connection coming from your network IP, after that mongo try to communicate again but evidently the connection was already dropped, your side.

```
7 2016-05-06 13:45:53.107239 195.134.66.105 -> 146.48.123.72 TCP 74 57276 > 27017 [SYN] Seq=0 Win=29200 Len=0 MSS=1460
SACK_PERM=1 TSval=536420872 TSecr=0 WS=128
8 2016-05-06 13:45:53.107297 146.48.123.72 -> 195.134.66.105 TCP 74 27017 > 57276 [SYN, ACK] Seq=0 Ack=1 Win=5792 Len=0 MSS=1460
SACK_PERM=1 TSval=3880630795 TSecr=536420872 WS=128
9 2016-05-06 13:45:53.172115 195.134.66.105 -> 146.48.123.72 TCP 66 57276 > 27017 [ACK] Seq=1 Ack=1 Win=29312 Len=0 TSval=536420889
TSecr=3880630795
10 2016-05-06 13:45:53.172349 195.134.66.105 -> 146.48.123.72 MONGO 124 57276 > 27017 [PSH, ACK] Seq=1 Ack=1 Win=29312 Len=58
TSval=536420889 TSecr=3880630795
11 2016-05-06 13:45:53.172388 146.48.123.72 -> 195.134.66.105 TCP 66 27017 > 57276 [ACK] Seq=1 Ack=59 Win=5888 Len=0
TSval=3880630811 TSecr=536420889
12 2016-05-06 13:45:53.173386 146.48.123.72 -> 195.134.66.105 MONGO 625 27017 > 57276 [PSH, ACK] Seq=1 Ack=59 Win=5888 Len=559
TSval=3880630811 TSecr=536420889
13 2016-05-06 13:45:53.238327 195.134.66.105 -> 146.48.123.72 TCP 66 57276 > 27017 [ACK] Seq=59 Ack=560 Win=30336 Len=0
TSval=536420906 TSecr=3880630811
14 2016-05-06 13:45:53.238587 195.134.66.105 -> 146.48.123.72 MONGO 125 57276 > 27017 [PSH, ACK] Seq=59 Ack=560 Win=30336 Len=59
TSval=536420906 TSecr=3880630811
15 2016-05-06 13:45:53.238811 146.48.123.72 -> 195.134.66.105 MONGO 889 27017 > 57276 [PSH, ACK] Seq=560 Ack=118 Win=5888 Len=823
TSval=3880630828 TSecr=536420906
16 2016-05-06 13:45:53.240033 195.134.66.105 -> 146.48.123.72 TCP 54 57276 > 27017 [RST, ACK] Seq=1 Ack=1 Win=29312 Len=0
17 2016-05-06 13:45:53.503147 146.48.123.72 -> 195.134.66.105 MONGO 889 [TCP Retransmission] 27017 > 57276 [PSH, ACK] Seq=560
Ack=118 Win=5888 Len=823 TSval=3880630894 TSecr=536420906
18 2016-05-06 13:45:54.030144 146.48.123.72 -> 195.134.66.105 MONGO 889 [TCP Retransmission] 27017 > 57276 [PSH, ACK] Seq=560
Ack=118 Win=5888 Len=823 TSval=3880631026 TSecr=536420906
...
19 2016-05-06 13:45:55.086154 146.48.123.72 -> 195.134.66.105 MONGO 889 [TCP Retransmission] 27017 > 57276 [PSH, ACK] Seq=560
Ack=118 Win=5888 Len=823 TSval=3880631290 TSecr=536420906
...
...
3275 2016-05-06 14:53:30.934149 146.48.123.72 -> 195.134.66.105 MONGO 889 [TCP Retransmission] 27017 > 33108 [PSH, ACK] Seq=560
Ack=118 Win=5888 Len=823 TSval=3881645252 TSecr=537433283
3966 2016-05-06 15:03:02.234149 146.48.123.72 -> 195.134.66.105 MONGO 889 [TCP Retransmission] 27017 > 33543 [PSH, ACK] Seq=560
Ack=118 Win=5888 Len=823 TSval=3881788077 TSecr=537577928
4955 2016-05-06 15:16:47.479604 195.134.66.105 -> 146.48.123.72 TCP 74 34149 > 27017 [SYN] Seq=0 Win=29200 Len=0 MSS=1460
SACK_PERM=1 TSval=537784466 TSecr=0 WS=128
4956 2016-05-06 15:16:47.479674 146.48.123.72 -> 195.134.66.105 TCP 74 27017 > 34149 [SYN, ACK] Seq=0 Ack=1 Win=5792 Len=0 MSS=1460
SACK_PERM=1 TSval=3881994388 TSecr=537784466 WS=128
4957 2016-05-06 15:16:47.572079 195.134.66.105 -> 146.48.123.72 TCP 66 34149 > 27017 [ACK] Seq=1 Ack=1 Win=29312 Len=0
TSval=537784483 TSecr=3881994388
4958 2016-05-06 15:16:47.572167 195.134.66.105 -> 146.48.123.72 MONGO 124 34149 > 27017 [PSH, ACK] Seq=1 Ack=1 Win=29312 Len=58
TSval=537784483 TSecr=3881994388
4959 2016-05-06 15:16:47.572193 146.48.123.72 -> 195.134.66.105 TCP 66 27017 > 34149 [ACK] Seq=1 Ack=59 Win=5888 Len=0
TSval=3881994411 TSecr=537784483
4960 2016-05-06 15:16:47.573418 146.48.123.72 -> 195.134.66.105 MONGO 625 27017 > 34149 [PSH, ACK] Seq=1 Ack=59 Win=5888 Len=559
TSval=3881994411 TSecr=537784483
4961 2016-05-06 15:16:47.638905 195.134.66.105 -> 146.48.123.72 TCP 66 34149 > 27017 [ACK] Seq=59 Ack=560 Win=30336 Len=0
TSval=537784506 TSecr=3881994411
```

```
4962 2016-05-06 15:16:47.639174 195.134.66.105 -> 146.48.123.72 MONGO 125 34149 > 27017 [PSH, ACK] Seq=59 Ack=560 Win=30336 Len=59
TSval=537784506 TSecr=3881994411
4963 2016-05-06 15:16:47.639371 146.48.123.72 -> 195.134.66.105 MONGO 889 27017 > 34149 [PSH, ACK] Seq=560 Ack=118 Win=5888
Len=823 TSval=3881994428 TSecr=537784506
4964 2016-05-06 15:16:47.640624 195.134.66.105 -> 146.48.123.72 TCP 54 34149 > 27017 [RST, ACK] Seq=1 Ack=1 Win=29312 Len=0
4965 2016-05-06 15:16:47.926156 146.48.123.72 -> 195.134.66.105 MONGO 889 [TCP Retransmission] 27017 > 34149 [PSH, ACK] Seq=560
Ack=118 Win=5888 Len=823 TSval=3881994500 TSecr=537784506
4966 2016-05-06 15:16:48.503180 146.48.123.72 -> 195.134.66.105 MONGO 889 [TCP Retransmission] 27017 > 34149 [PSH, ACK] Seq=560
Ack=118 Win=5888 Len=823 TSval=3881994644 TSecr=537784506
...
4967 2016-05-06 15:16:49.654153 146.48.123.72 -> 195.134.66.105 MONGO 889 [TCP Retransmission] 27017 > 34149 [PSH, ACK] Seq=560
Ack=118 Win=5888 Len=823 TSval=3881994932 TSecr=537784506
...
```

We have the same behavior running the app on our server but there is no reset and the connection continue with the data transmission and is correctly closed at the end.

You should try to understand why your network resets the connection, I have no way to investigate further on our side at the moment.

#15 - May 09, 2016 04:45 PM - Kostas Hirikakis

- Status changed from Closed to In Progress

I am sorry but I do not understand why this issue closed as the connection to the server is still refused.

We tried from two different static ip addresses,

* one behind a firewall (193.92.78.53) and

* one directly connected to the interne (195.134.66.105).

The behavior is the same: connection refused.

These two servers are connecting to a bunch of servers and ports, never failing, always completing the communication, data transmitted and closed at the end.

I don't see evidence why this side of the tcp connection drops the ball.

From what I see from the logs, the server refuses connection and times out, not the client.

#16 - May 12, 2016 01:25 PM - Panagiota Koltsida

- File catalina(pamvotis_1).out added

The colleagues from I2S asked me to try the to use the same client from my machine. It seems that I get the same error regarding the mongoDB connection.

My ip is: 195.134.66.42 and I tested the client in tomcat 7. Attached you can find the logs from catalina.out

Do you think it could be a problem related to the application server setup or maybe we miss any needed file?

#17 - May 12, 2016 05:28 PM - Roberto Cirillo

- Status changed from In Progress to Closed

Kostas Hirikakis wrote:

I am sorry but I do not understand why this issue closed as the connection to the server is still refused.
We tried from two different static ip addresses,
* one behind a firewall (193.92.78.53) and
* one directly connected to the interne (195.134.66.105).
The behavior is the same: connection refused.

Dear Kostas,

It is not true! The behavior is a ReadTimeOut and not a ConnectionRefused as you say. Where do you have seen ConnectionRefused?
In addition from tcp dump log the reset come from your network:

```
4964 2016-05-06 15:16:47.640624 195.134.66.105 -> 146.48.123.72 TCP 54 34149 > 27017 [RST, ACK] Seq=1 Ack=1 Win=29312 Len=0
4965 2016-05-06 15:16:47.926156 146.48.123.72 -> 195.134.66.105 MONGO 889 [TCP Retransmission] 27017 > 34149 [PSH, ACK] Seq=560
Ack=118 Win=5888 Len=823 TSval=3881994500 TSecr=537784506
4966 2016-05-06 15:16:48.503180 146.48.123.72 -> 195.134.66.105 MONGO 889 [TCP Retransmission] 27017 > 34149 [PSH, ACK] Seq=560
Ack=118 Win=5888 Len=823 TSval=3881994644 TSecr=537784506
```

In particular, in this line there is the Reset [RST]:

```
4964 2016-05-06 15:16:47.640624 195.134.66.105 -> 146.48.123.72 TCP 54 34149 > 27017 [RST, ACK] Seq=1 Ack=1 Win=29312 Len=0
```

These two servers are connecting to a bunch of servers and ports, never failing, always completing the communication, data transmitted and closed at the end.

I don't see evidence why this side of the tcp connection drops the ball.

Maybe you use other standard ports and not a dynamic tcp ports.

The evidence come from tcpdump log:

```
4964 2016-05-06 15:16:47.640624 195.134.66.105 -> 146.48.123.72 TCP 54 34149 > 27017 [RST, ACK] Seq=1 Ack=1 Win=29312 Len=0
```

We could find a workaround if you couldn't resolve this issue. I'm going to re-close this ticket because we can't do anything about this issue.

#18 - May 12, 2016 05:44 PM - Gianpaolo Coro

Dear Kostas, I think the best way for you to exploit the processing tools of the infrastructure is to use WPS, where you embed the file to process in the request and you get http links to download the results from. This will make you avoid these networking issues. Please, check this example I created for you and try to either use it directly or reproduce it in Java (using the same basic http requests): #3987

#19 - May 12, 2016 06:04 PM - Roberto Cirillo

- Status changed from Closed to Feedback

#20 - May 12, 2016 07:15 PM - Kostas Hirikakis

Dear Roberto

the java Statistical Manager library (including whichever infrastructure supports it) have three different, auxiliary clients to serve. I can assure you that one of them (mine) is a fresh pure Debian installation, nothing added, nothing touched. Every client fails the simple test found in the documentation page. We are talking about three auxiliary clients, one at i2s and two at NKUA.

Even if this a fault on the client, if something is missing or is misconfigured, please advise on how to solve it.

In other words, what are the sw and/or hw specifications for "portal bundle 4.0.0-SNAPSHOT with tomcat 7.0.62" in order to be able to run the demo servlet?

#21 - May 12, 2016 07:15 PM - Kostas Hirikakis

Gianpaolo, we will switch to the WPS if we cannot overtake the java client difficulties, what else could we do? That means that we lost a respectable amount of time troubleshooting, which is not even the hard point. WPS instead of Java means we are losing strong types, available methods and all this stuff. Instead we get into XML reading and parsing, with all the potential problems it bears (malform, invalidation, incompleteness etc).

#22 - May 13, 2016 02:38 PM - Tommaso Piccioli

Kostas, could you please do other test today, asap? from one or, better, from all your clients?

We have completely disabled our firewall on the mongo servers.

After the test, we will double-check if there are other filters on our network.

#23 - May 13, 2016 03:32 PM - Panagiota Koltsida

Hi @tommaso.piccioli@isti.cnr.it . I have tried with Kostas client but now I get another exception

```
org.gcube.common.clients.exceptions.DiscoveryException: no endpoints found for
org.gcube.resources.discovery.client.queries.impl.XQuery@1dedd78f=declare namespace ic = '
http://gcube-system.org/namespaces/informationssystem/registry'; for $resource in
collection('/db/Profiles/RunningInstance')//Document/Data/ic:Profile/Resource, $entry in
$resource/Profile/AccessPoint/RunningInstanceInterfaces/Endpoint where ($resource/Profile/ServiceClass/text() eq 'DataAnalysis') and
($resource/Profile/ServiceName/text() eq 'statistical-manager-gcubews') and ($resource/Profile/DeploymentData/Status/text() eq 'ready') and
($entry/@EntryName/string() eq 'gcube/data/analysis/statisticalmanager/statisticalmanagerfactory') return $entry/text()
at org.gcube.common.clients.delegates.DiscoveryDelegate.make(DiscoveryDelegate.java:118)
at org.gcube.common.clients.delegates.AsyncProxyDelegate.make(AsyncProxyDelegate.java:56)
at org.gcube.data.analysis.statisticalmanager.proxies.StatisticalManagerDefaultFactory.getAlgorithms(StatisticalManagerDefaultFactory.java:177)
```

Is the statistical manager running on devVRE?

#24 - May 13, 2016 06:21 PM - Fabio Sinibaldi

Hi, yes the service wasn't available in that VRE, now it is.
Please, keep in mind that you can inspect scopes status on the resource monitor instances in our portal (in this case <https://dev.d4science.org/web/guest/monitor>).

#25 - May 13, 2016 06:44 PM - Kostas Hirikakis

Now that the Statistical Manager service is up I tested and got [timeout error](#). @tommaso.piccioli@isti.cnr.it on the other hand I don't know you current firewall status so this may be a void test.

#26 - May 14, 2016 04:38 PM - Tommaso Piccioli

Firewall was disabled and the tcpdump shows always the same pattern, there is a connection reset coming from your network IP.

#27 - May 17, 2016 05:16 PM - Kostas Hirikakis

@tommaso.piccioli@isti.cnr.it just to be clear, the connection reset comes from "our IPs", as already described (ie this is not a special case affecting one client).

#28 - May 26, 2016 09:47 PM - Denis Pyriochos

- Status changed from Feedback to In Progress

#29 - May 26, 2016 10:25 PM - Denis Pyriochos

- Related to Support #4136: Cannot access mongo database server added

#30 - May 30, 2016 09:50 AM - Roberto Cirillo

Dear Kostas, please, could you perform another test from all your clients asap?

#31 - May 30, 2016 03:37 PM - Denis Pyriochos

The difficult setup (portal behind router) seems to be working - no timeouts. We will be testing on more servers over the next couple of days.

#32 - Jun 07, 2016 04:13 PM - Tommaso Piccioli

- Assignee changed from Roberto Cirillo to _InfraScience Systems Engineer

Please let us know if you are done with this issue tests and everything is fine

#33 - Jun 07, 2016 04:14 PM - Tommaso Piccioli

- Status changed from In Progress to Feedback

#34 - Jun 07, 2016 10:30 PM - Denis Pyriochos

- Status changed from Feedback to Closed

Files

servlet.tar.gz	5.14 KB	Apr 27, 2016	Kostas Hirikakis
tomcat_logs.tar.gz	15.8 KB	Apr 27, 2016	Kostas Hirikakis
tomcat_logs.tar.gz	15.8 KB	Apr 30, 2016	Kostas Hirikakis
tomcat_logs.tar.gz	31.5 KB	May 04, 2016	Kostas Hirikakis
netstat.out.tar.gz	916 KB	May 04, 2016	Kostas Hirikakis
tomcat_logs.tar.gz	30.9 KB	May 04, 2016	Kostas Hirikakis
tcpFlow.log	2.37 KB	May 05, 2016	Roberto Cirillo
catalina(pamvotis_1).out	68.4 KB	May 12, 2016	Panagiota Koltsida