

Debug Project Explorer JUnit

Finished after 12,111 seconds

Runs: 1/1 Errors: 0 Failures: 0

> Test1ConnectDisconnect [Runner: JUnit 5] (12,010 s)

```
<terminated> Test1ConnectDisconnect [JUnit] /Library/Java/JavaVirtualMachines/jdk-14.0.2.jdk/Content/Dispatcher running
Broker running
.Broker accept [0]
.!1
?
Message [type=CONNECT, user=testuser]
onConnect:Message [type=CONNECT, user=testuser]
Broker stopping
.?
Message [type=DISCONNECT, user=testuser]
onDisconnect:Message [type=DISCONNECT, user=testuser]
.....Dispatcher stopping
```

Debug Project Explorer JUnit

Finished after 22,106 seconds

Runs: 1/1 Errors: 0 Failures: 0

> Test2Reconnect [Runner: JUnit 5] (22,000 s)

```
<terminated> Test2Reconnect [JUnit] /Library/Java/JavaVirtualMachines/jdk-14.0.2.jdk/Content/Dispatcher running
Broker running
.Broker accept [0]
.!2
?
Message [type=CONNECT, user=client1]
onConnect:Message [type=CONNECT, user=client1]
Broker accept [1]
.?
Message [type=DISCONNECT, user=client1]
onDisconnect:Message [type=DISCONNECT, user=client1]
.....!1
?
Message [type=CONNECT, user=client1]
onConnect:Message [type=CONNECT, user=client1]
Broker stopping
.?
Message [type=DISCONNECT, user=client1]
onDisconnect:Message [type=DISCONNECT, user=client1]
.....Dispatcher stopping
```

Debug Project Explorer JUnit

Finished after 12,082 seconds

Runs: 1/1 Errors: 0 Failures: 0

> Test3MultipleConnections [Runner: JUnit 5] (11,985 s)

```
<terminated> Test3MultipleConnections [JUnit] /Library/Java/JavaVirtualMachines/jdk-14.0.2.jdk/Content/Dispatcher running
Broker running
.Broker accept [0]
.!2
?
Message [type=CONNECT, user=client1]
onConnect:Message [type=CONNECT, user=client1]
Broker accept [1]
!1
?
Message [type=CONNECT, user=client2]
onConnect:Message [type=CONNECT, user=client2]
Broker stopping
.?
Message [type=DISCONNECT, user=client2]
onDisconnect:Message [type=DISCONNECT, user=client2]
?
Message [type=DISCONNECT, user=client1]
onDisconnect:Message [type=DISCONNECT, user=client1]
.....Dispatcher stopping
```

Debug Project Explorer JUnit

Finished after 12,119 seconds

Runs: 1/1 Errors: 0 Failures: 0

> Test4CreateDelete [Runner: JUnit 5] (12,013 s)

```
<terminated> Test4CreateDelete [JUnit] /Library/Java/JavaVirtualMachines/jdk-14.0.2.jdk/Contents/Home/bin/java (6. mar. 2022, 16:32:45 – 16:3
Dispatcher running
Broker running
.Broker accept [0]
.!?
Message [type=CONNECT, user=client]
onConnect:Message [type=CONNECT, user=client]
Broker stopping
.?
Message [type=" + this.getType() + ", user=" + this.getUser() + ", topic=" + topic + "]
onCreateTopic:Message [type=" + this.getType() + ", user=" + this.getUser() + ", topic=" + topic + "]
.?
DeleteTopicMsg [topic=testtopic, getType()=DELETETOPIC, getUser()=client]
onDeleteTopic:DeleteTopicMsg [topic=testtopic, getType()=DELETETOPIC, getUser()=client]
.?
Message [type=DISCONNECT, user=client]
onDisconnect:Message [type=DISCONNECT, user=client]
.....Dispatcher stopping
```

Debug Project Explorer JUnit

Finished after 12,112 seconds

Runs: 1/1 Errors: 0 Failures: 0

> Test5Subscribe [Runner: JUnit 5] (12,010 s)

```
<terminated> Test5Subscribe [JUnit] /Library/Java/JavaVirtualMachines/jdk-14.0.2.jdk/Contents/Home/bin/java (6. mar. 2022, 16:33:10 – 16:3
Broker running
Dispatcher running
Broker accept [0]
.!?
?
Message [type=CONNECT, user=client]
onConnect:Message [type=CONNECT, user=client]
Broker stopping
.?
Message [type=" + this.getType() + ", user=" + this.getUser() + ", topic=" + topic + "]
onCreateTopic:Message [type=" + this.getType() + ", user=" + this.getUser() + ", topic=" + topic + "]
.?
SubscribeMsg [topic=testtopic]
onSubscribe:SubscribeMsg [topic=testtopic]
.?
UnsubscribeMsg [topic=testtopic, getType()=UNSUBSCRIBE, getUser()=client]
onUnsubscribe:UnsubscribeMsg [topic=testtopic, getType()=UNSUBSCRIBE, getUser()=client]
.?
Message [type=DISCONNECT, user=client]
onDisconnect:Message [type=DISCONNECT, user=client]
.....Dispatcher stopping
```

Debug Project Explorer JUnit

Finished after 14,115 seconds

Runs: 1/1 Errors: 0 Failures: 0

> Test6Publish [Runner: JUnit 5] (14,012 s)

```
<terminated> Test6Publish [JUnit] /Library/Java/JavaVirtualMachines/jdk-14.0.2.jdk/Contents/Home/bin/java (6. mar. 2022, 16:33:33 – 16:33:48)
Dispatcher running
Broker running
.Broker accept [0]
.!?
?
Message [type=CONNECT, user=client]
onConnect:Message [type=CONNECT, user=client]
Broker stopping
.?
Message [type=" + this.getType() + ", user=" + this.getUser() + ", topic=" + topic + "]
onCreateTopic:Message [type=" + this.getType() + ", user=" + this.getUser() + ", topic=" + topic + "]
.?
SubscribeMsg [topic=testtopic]
onSubscribe:SubscribeMsg [topic=testtopic]
.?
PublishMsg [topic=testtopic, message=message from client on topic, getType()=PUBLISH, getUser()=client]
onPublish:PublishMsg [topic=testtopic, message=message from client on topic, getType()=PUBLISH, getUser()=client]
.?
UnsubscribeMsg [topic=testtopic, getType()=UNSUBSCRIBE, getUser()=client]
onUnsubscribe:UnsubscribeMsg [topic=testtopic, getType()=UNSUBSCRIBE, getUser()=client]
.?
Message [type=DISCONNECT, user=client]
onDisconnect:Message [type=DISCONNECT, user=client]
.....Dispatcher stopping
```

Failure Trace

Debug Project Explorer JUnit

Finished after 16,112 seconds

Runs: 1/1 Errors: 0 Failures: 0

> Test7MultiPublish [Runner: JUnit 5] (16,028 s)

```
<terminated> Test7MultiPublish [JUnit] /Library/Java/JavaVirtualMachines/jdk-14.0.2.jdk/Contents/Home/bin/java (6. mar. 2022, 16:33:58 – 16:34:15)
Dispatcher running
Broker running
.Broker accept []
.12
?
Message [type=CONNECT, user=client1]
onConnect:Message [type=CONNECT, user=client1]
Broker accept [1]
?
Message [type=" + this.getType() + ", user=" + this.getUser() + ", topic=" + topic + "]
onCreateTopic:Message [type=" + this.getType() + ", user=" + this.getUser() + ", topic=" + topic + "]
.11
?
Message [type=CONNECT, user=client2]
onConnect:Message [type=CONNECT, user=client2]
Broker stopping
.?
SubscribeMsg [topic=testtopic]
onSubscribe:SubscribeMsg [topic=testtopic]
?
SubscribeMsg [topic=testtopic]
onSubscribe:SubscribeMsg [topic=testtopic]
...
PublishMsg [topic=testtopic, message=message from client on topic, getType()=PUBLISH, getUser()=client1]
onPublish:PublishMsg [topic=testtopic, message=message from client on topic, getType()=PUBLISH, getUser()=client1]
.!
Message [type=DISCONNECT, user=client2]
onDisconnect:Message [type=DISCONNECT, user=client2]
?
Message [type=DISCONNECT, user=client1]
onDisconnect:Message [type=DISCONNECT, user=client1]
.....Dispatcher stopping
```

Failure Trace

Debug Project Explorer JUnit

Finished after 0,07 seconds

Runs: 7/7 Errors: 0 Failures: 0

> TestStorage [Runner: JUnit 5] (0,000 s)

- ✓ testremoveClientSession (0,000 s)
- ✓ testaddSubscriber (0,000 s)
- ✓ testdeleteTopic (0,000 s)
- ✓ testremoveSubscribers (0,000 s)
- ✓ testaddSubscribers (0,000 s)
- ✓ testcreateTopic (0,000 s)
- ✓ testaddClientSession (0,000 s)

Console

<terminated> Test

Debug Project Explorer JUnit

Finished after 19,141 seconds

Runs: 1/1 Errors: 0 Failures: 0

TestIoTSystem [Runner: JUnit 5] (19,053 s)

```
<terminated> TestIoTSystem [JUnit] /Library/Java/JavaVirtualMachines/jdk-14.0.2.jdk/Contents/Home/bin/java (6. mar. 2022, 16:34:52 – 16:35:12)
IoT system starting ...
Starting broker ...
Broker server : 8080
Dispatcher running
Broker running
.Broker accept []
...Starting display ...
Display starting ...
!0
?
Message [type=CONNECT, user=display]
onConnect:Message [type=CONNECT, user=display]
Broker accept []
.?
Message [type=" + this.getType() + ", user=" + this.getUser() + ", topic=" + topic + "]
onCreateTopic:Message [type=" + this.getType() + ", user=" + this.getUser() + ", topic=" + topic + "]
.?
SubscribeMsg [topic=temperature]
onSubscribe:SubscribeMsg [topic=temperature]
..Starting sensor ...
!0
?
Message [type=CONNECT, user=sensor]
onConnect:Message [type=CONNECT, user=sensor]
Broker accept []
Temperature device stopping ...
.?
PublishMsg [topic=temperature, message=-10, getType()=PUBLISH, getUser()=sensor]
onPublish:PublishMsg [topic=temperature, message=-10, getType()=PUBLISH, getUser()=sensor]
.?
PublishMsg [topic=temperature, message=-10, getType()=PUBLISH, getUser()=sensor]
onPublish:PublishMsg [topic=temperature, message=-10, getType()=PUBLISH, getUser()=sensor]
.?
PublishMsg [topic=temperature, message=-10, getType()=PUBLISH, getUser()=sensor]
onPublish:PublishMsg [topic=temperature, message=-10, getType()=PUBLISH, getUser()=sensor]
.?
PublishMsg [topic=temperature, message=-10, getType()=PUBLISH, getUser()=sensor]
onPublish:PublishMsg [topic=temperature, message=-10, getType()=PUBLISH, getUser()=sensor]
.?
PublishMsg [topic=temperature, message=-10, getType()=PUBLISH, getUser()=sensor]
onPublish:PublishMsg [topic=temperature, message=-10, getType()=PUBLISH, getUser()=sensor]
.?
PublishMsg [topic=temperature, message=-10, getType()=PUBLISH, getUser()=sensor]
```

ChApp - Chat Application

Configure

Disconnect nybruker localhost:8080 Messages

Create Topic melding Delete Topic

Subscribe Unsubscribe

Publish melding

ChApp - Chat Application

Configure

Disconnect me localhost:8080 Messages

Create Topic Delete Topic

Subscribe melding Unsubscribe

Publish

[nybruker]dette er en melding

Console Problems Debug Shell

```
BrokerServer [Java Application] /Library/Java/JavaVirtualMachines/jdk-14.0.2.jdk/Contents/Home/bin/java (6. mar. 2022, 16:44:59)
Message [type=CONNECT, user=nybruker]
onConnect:Message [type=CONNECT, user=nybruker]
Broker accept []
. ....?
Message [type=" + this.getType() + ", user=" + this.getUser() + ", topic=" + topic + "]
onCreateTopic:Message [type=" + this.getType() + ", user=" + this.getUser() + ", topic=" + topic + "]
. ....?
SubscribeMsg [topic=melding]
onSubscribe:SubscribeMsg [topic=melding]
. ....?
PublishMsg [topic=melding, message=dette er en melding, getType()=PUBLISH, getUser()=nybruker]
onPublish:PublishMsg [topic=melding, message=dette er en melding, getType()=PUBLISH, getUser()=nybruker]
. ....?
```