

**RELAY**  
**Testing Document**

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TDQC – Cohort 5

18 Jan 2019

## 1.1 Testing Plans

The basis of testing relay was to validate the environmental variable as well as trying different combinations to test the error handling effectively.

## 1.2 No Relay Variable

```
skydev@skydev:~/TDQC-Projects/relay$ echo $RELAY
skydev@skydev:~/TDQC-Projects/relay$ ./bin/dispatcher
RELAY environmental variable must be set.
skydev@skydev:~/TDQC-Projects/relay$ ./bin/listener
RELAY environmental variable must be set.
skydev@skydev:~/TDQC-Projects/relay$
```

## 1.3 Invalid Relay Variable

```
skydev@skydev:~/TDQC-Projects/relay$ RELAY=10
skydev@skydev:~/TDQC-Projects/relay$ export RELAY
skydev@skydev:~/TDQC-Projects/relay$ ./bin/dispatcher
RELAY variable must be between 10025 and 20025.
skydev@skydev:~/TDQC-Projects/relay$ RELAY=20025
skydev@skydev:~/TDQC-Projects/relay$ ./bin/dispatcher
RELAY variable must be between 10025 and 20025.
skydev@skydev:~/TDQC-Projects/relay$ RELAY=20024
skydev@skydev:~/TDQC-Projects/relay$ ./bin/listener
Cannot connect to server.
skydev@skydev:~/TDQC-Projects/relay$
```

## 1.4 Invalid Switches

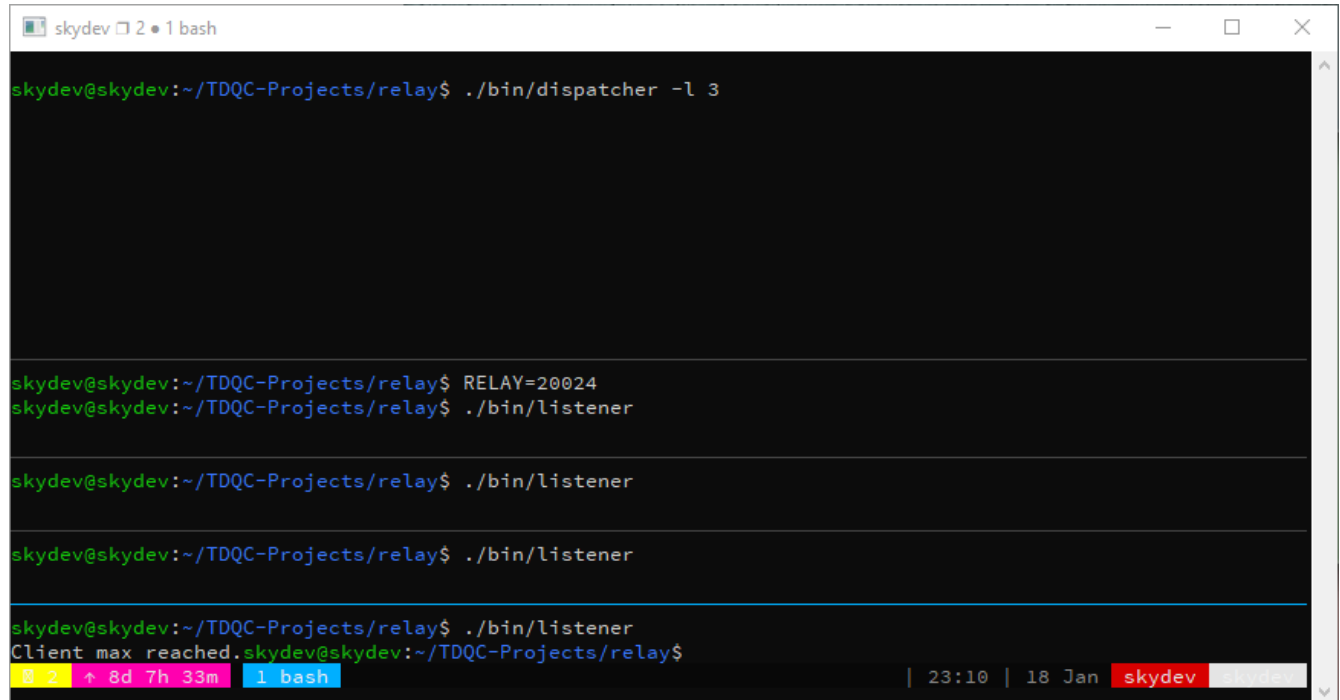
```
skydev@skydev:~/TDQC-Projects/relay$ ./bin/dispatcher -a
./bin/dispatcher: invalid option -- 'a'
USAGE: ./dispatcher [-l <limit>]
skydev@skydev:~/TDQC-Projects/relay$ ./bin/dispatcher -l
./bin/dispatcher: option requires an argument -- 'l'
USAGE: ./dispatcher [-l <limit>]
skydev@skydev:~/TDQC-Projects/relay$ ./bin/listener -a
This program does not support arguments.
skydev@skydev:~/TDQC-Projects/relay$ ./bin/dispatcher -l 4

<-Running
```

## 1.5 Listener Without Dispatcher

```
skydev@skydev:~/TDQC-Projects/relay$ ./bin/listener
Cannot connect to server.
skydev@skydev:~/TDQC-Projects/relay$
```

## 1.6 Client List Maxed



A terminal window titled "skydev 2 • 1 bash" showing a sequence of commands and their outputs. The user runs `./bin/dispatcher -l 3`, then sets `RELAY=20024`, and then repeatedly runs `./bin/listener`. The final output of the last listener command is "Client max reached." The terminal status bar at the bottom shows "2" in a yellow box, "8d 7h 33m" in a pink box, "1 bash" in a blue box, and the time "23:10" and date "18 Jan" next to the username "skydev".

```
skydev@skydev:~/TDQC-Projects/relay$ ./bin/dispatcher -l 3

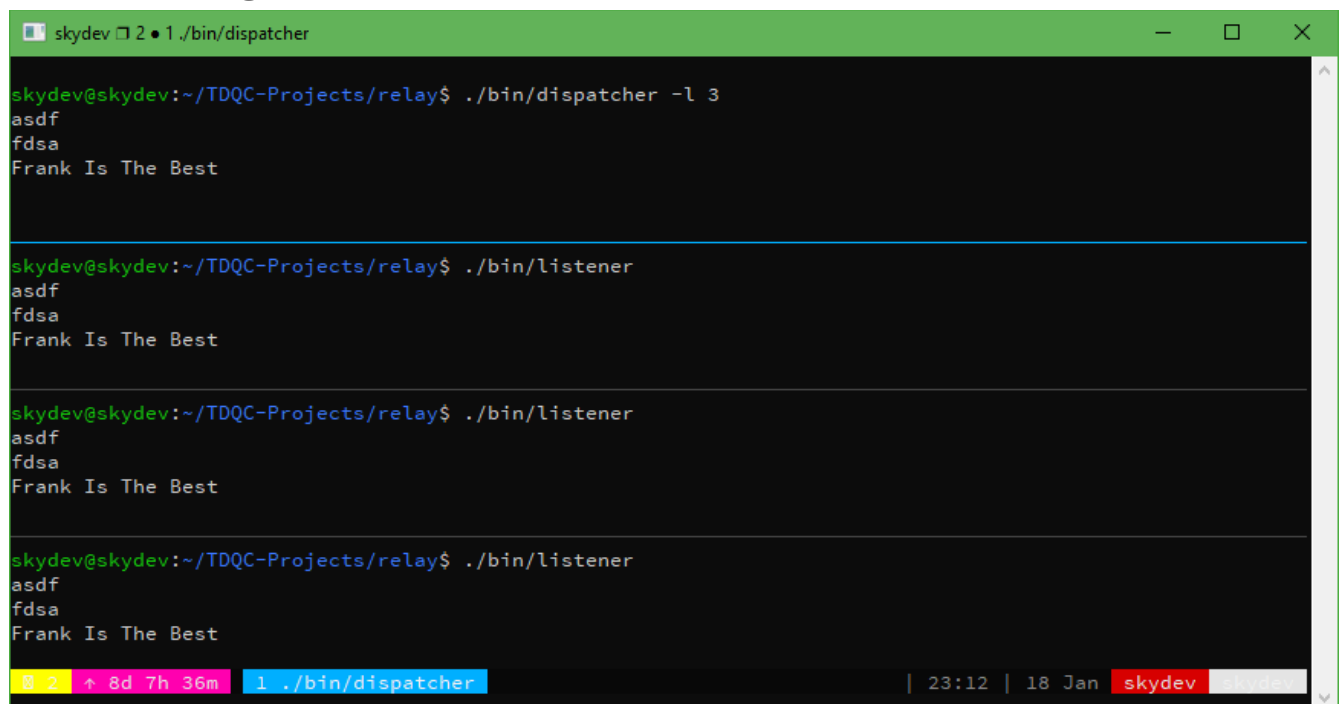
skydev@skydev:~/TDQC-Projects/relay$ RELAY=20024
skydev@skydev:~/TDQC-Projects/relay$ ./bin/listener

skydev@skydev:~/TDQC-Projects/relay$ ./bin/listener

skydev@skydev:~/TDQC-Projects/relay$ ./bin/listener

skydev@skydev:~/TDQC-Projects/relay$ ./bin/listener
Client max reached.skydev@skydev:~/TDQC-Projects/relay$
```

## 1.7 Working as intended



A terminal window titled "skydev 2 • 1 ./bin/dispatcher" showing the same sequence of commands as in the previous screenshot. However, the output of the `./bin/listener` commands now shows the received data: "asdf", "fdsa", and "Frank Is The Best". The terminal status bar at the bottom shows "2" in a yellow box, "8d 7h 36m" in a pink box, "1 ./bin/dispatcher" in a blue box, and the time "23:12" and date "18 Jan" next to the username "skydev".

```
skydev@skydev:~/TDQC-Projects/relay$ ./bin/dispatcher -l 3
asdf
fdsa
Frank Is The Best

skydev@skydev:~/TDQC-Projects/relay$ ./bin/listener
asdf
fdsa
Frank Is The Best

skydev@skydev:~/TDQC-Projects/relay$ ./bin/listener
asdf
fdsa
Frank Is The Best

skydev@skydev:~/TDQC-Projects/relay$ ./bin/listener
asdf
fdsa
Frank Is The Best
```

## 1.8 Clients close when server exits

```
skydev skydev 2 • 1 bash
skydev@skydev:~/TDQC-Projects/relay$ ./bin/dispatcher -l 3
asdf
fdsa
Frank Is The Best

skydev@skydev:~/TDQC-Projects/relay$

skydev@skydev:~/TDQC-Projects/relay$ ./bin/listener
asdf
fdsa
Frank Is The Best

skydev@skydev:~/TDQC-Projects/relay$
skydev@skydev:~/TDQC-Projects/relay$ ./bin/listener
asdf
fdsa
Frank Is The Best

skydev@skydev:~/TDQC-Projects/relay$
skydev@skydev:~/TDQC-Projects/relay$ ./bin/listener
asdf
fdsa
Frank Is The Best

skydev@skydev:~/TDQC-Projects/relay$
```

|        |        |       |        |
|--------|--------|-------|--------|
| skydev | skydev | 23:13 | 18 Jan |
| skydev | skydev | 23:13 | 18 Jan |

2 ↑ 8d 7h 36m 1 bash