

Relatório da Atividade 4: Raft

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Resumo

Esse relatório documenta um trabalho com o protocolo Raft para consenso distribuído. Não será trabalhado com *log replication*.

Index Terms

Raft, Golang, sistema distribuído

I. IMPLEMENTAÇÃO

A. Ao receber um *AppendEntry* (*heartbeat*)

Subsection text here.

- 1) *Follower*:
- 2) *Candidate*:
- 3) *Leader*:

B. Ao receber um *RequestVote*

Subsubsection text here.

- 1) *Follower*:
- 2) *Candidate*:
- 3) *Leader*:

C. Ao receber um *Reply*

Subsubsection text here.

- 1) *Follower*:
- 2) *Candidate*:
- 3) *Leader*:

II. RESULTADOS E CONCLUSÕES

Na Figura 1, foi apresentado uma captura de tela de um funcionamento com todas instâncias funcionando.

- Server 2 vira *cadidate*
- Server 2 recebe voto de 1
- Server 3 vira *candidate*
- Server 1 nega voto para 3 (já votou em 2)
- Server 2 nega voto para 3 (já é *candidate*)
- Server 2 recebe voto de 4 e 5 (e vira *leader*)
- Server 3 não consegue maioria dos votos
- Server 3 faz *Step Down*
- Server 1, 3, 4 e 5 continuam como *follower* indefinidamente, pois 2 é *leader*

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isabelle@isabelle-Inspiron-5448: ~/Graduacao/hirata-juliana-CES-27/Lab4/src/labRaft/run 80x23
$ go run run.go -id 1
2019/10/07 10:07:40 [SERVER] Listening on 'localhost:3001'
2019/10/07 10:07:40 [FOLLOWER] Run Logic.
2019/10/07 10:07:40 [SERVER] Accepting connections.
2019/10/07 10:07:42 [FOLLOWER] Update old term '0' to new term '1' from 'localhost:3002'.
2019/10/07 10:07:42 [FOLLOWER] Resetting election timeout.
2019/10/07 10:07:42 [FOLLOWER] Vote accepted to 'localhost:3002' for term '1'.
2019/10/07 10:07:42 [FOLLOWER] Run Logic.
2019/10/07 10:07:45 [FOLLOWER] Vote denied to 'localhost:3003' for term '1'.
2019/10/07 10:07:45 [FOLLOWER] Run Logic.
2019/10/07 10:07:45 [FOLLOWER] Update old term '1' to new term '2' from 'localhost:3002'.
2019/10/07 10:07:45 [FOLLOWER] Resetting election timeout.
2019/10/07 10:07:45 [FOLLOWER] Vote accepted to 'localhost:3002' for term '2'.
2019/10/07 10:07:45 [FOLLOWER] Run Logic.
2019/10/07 10:07:45 [FOLLOWER] Resetting election timeout.
2019/10/07 10:07:45 [FOLLOWER] Accept AppendEntry from 'localhost:3002'.
2019/10/07 10:07:45 [FOLLOWER] Run Logic.
2019/10/07 10:07:45 [FOLLOWER] Resetting election timeout.
2019/10/07 10:07:45 [FOLLOWER] Accept AppendEntry from 'localhost:3002'.
2019/10/07 10:07:45 [FOLLOWER] Run Logic.
2019/10/07 10:07:45 [FOLLOWER] Resetting election timeout.

isabelle@isabelle-Inspiron-5448: ~/Graduacao/hirata-juliana-CES-27/Lab4/src/labRaft/run 80x23
Raft/run <master>
$ go run run.go -id 2
2019/10/07 10:07:42 [SERVER] Listening on 'localhost:3002'
2019/10/07 10:07:42 [FOLLOWER] Run Logic.
2019/10/07 10:07:42 [SERVER] Accepting connections.
2019/10/07 10:07:42 [FOLLOWER] Election timeout.
2019/10/07 10:07:42 [CANDIDATE] Run Logic.
2019/10/07 10:07:42 [CANDIDATE] Running for term '1'.
2019/10/07 10:07:42 [CANDIDATE] Vote granted by 'localhost:3001'.
2019/10/07 10:07:42 [CANDIDATE] VoteCount: 2
2019/10/07 10:07:42 [CANDIDATE] Vote denied to 'localhost:3003' for term '1'.
2019/10/07 10:07:45 [CANDIDATE] Run Logic.
2019/10/07 10:07:45 [CANDIDATE] Running for term '2'.
2019/10/07 10:07:45 [CANDIDATE] Vote granted by 'localhost:3001'.
2019/10/07 10:07:45 [CANDIDATE] VoteCount: 2
2019/10/07 10:07:45 [CANDIDATE] Vote granted by 'localhost:3003'.
2019/10/07 10:07:45 [CANDIDATE] VoteCount: 3
2019/10/07 10:07:45 [CANDIDATE] Becoming leader.
2019/10/07 10:07:45 [LEADER] Run Logic.
^Csignal: interrupt
isabelle@isabelle-Inspiron-5448: ~/Graduacao/hirata-juliana-CES-27/Lab4/src/labRaft/run <master>
$

isabelle@isabelle-Inspiron-5448: ~/Graduacao/hirata-juliana-CES-27/Lab4/src/labRaft/run 80x14
Raft/run <master>
$ go run run.go -id 3
2019/10/07 10:07:44 [SERVER] Listening on 'localhost:3003'
2019/10/07 10:07:44 [FOLLOWER] Run Logic.
2019/10/07 10:07:44 [SERVER] Accepting connections.
2019/10/07 10:07:45 [FOLLOWER] Election timeout.
2019/10/07 10:07:45 [CANDIDATE] Run Logic.
2019/10/07 10:07:45 [CANDIDATE] Running for term '1'.
2019/10/07 10:07:45 [CANDIDATE] Vote denied by 'localhost:3001'.
2019/10/07 10:07:45 [CANDIDATE] Vote denied by 'localhost:3002'.
2019/10/07 10:07:45 [CANDIDATE] Update old term '1' to new term '2' from 'localhost:3002'.
2019/10/07 10:07:45 [CANDIDATE] Stepping down.
2019/10/07 10:07:45 [FOLLOWER] Run Logic.

isabelle@isabelle-Inspiron-5448: ~/Graduacao/hirata-juliana-CES-27/Lab4/src/labRaft/run 80x15
Raft/run <master>
$ go run run.go -id 4
2019/10/07 10:07:46 [SERVER] Listening on 'localhost:3004'
2019/10/07 10:07:46 [FOLLOWER] Run Logic.
2019/10/07 10:07:46 [SERVER] Accepting connections.
2019/10/07 10:07:46 [FOLLOWER] Update old term '0' to new term '2' from 'localhost:3002'.
2019/10/07 10:07:46 [FOLLOWER] Resetting election timeout.
2019/10/07 10:07:46 [FOLLOWER] Accept AppendEntry from 'localhost:3002'.
2019/10/07 10:07:46 [FOLLOWER] Run Logic.
2019/10/07 10:07:46 [FOLLOWER] Resetting election timeout.
2019/10/07 10:07:46 [FOLLOWER] Accept AppendEntry from 'localhost:3002'.
2019/10/07 10:07:46 [FOLLOWER] Run Logic.
2019/10/07 10:07:46 [FOLLOWER] Resetting election timeout.
2019/10/07 10:07:46 [FOLLOWER] Accept AppendEntry from 'localhost:3002'.

isabelle@isabelle-Inspiron-5448: ~/Graduacao/hirata-juliana-CES-27/Lab4/src/labRaft/run 80x15
Raft/run <master>
$ go run run.go -id 5
2019/10/07 10:07:48 [SERVER] Listening on 'localhost:3005'
2019/10/07 10:07:48 [FOLLOWER] Run Logic.
2019/10/07 10:07:48 [SERVER] Accepting connections.
2019/10/07 10:07:48 [FOLLOWER] Update old term '0' to new term '2' from 'localhost:3002'.
2019/10/07 10:07:48 [FOLLOWER] Resetting election timeout.
2019/10/07 10:07:48 [FOLLOWER] Accept AppendEntry from 'localhost:3002'.
2019/10/07 10:07:48 [FOLLOWER] Run Logic.
2019/10/07 10:07:48 [FOLLOWER] Resetting election timeout.
2019/10/07 10:07:48 [FOLLOWER] Accept AppendEntry from 'localhost:3002'.
2019/10/07 10:07:48 [FOLLOWER] Run Logic.
2019/10/07 10:07:48 [FOLLOWER] Resetting election timeout.
2019/10/07 10:07:48 [FOLLOWER] Accept AppendEntry from 'localhost:3002'.
2019/10/07 10:07:48 [FOLLOWER] Run Logic.

```

Figura 1. Funcionamento normal para os 5 processos.

Na Figura 2, foi apresentado uma captura de tela de um funcionamento com falha do *leader* (com outra instância assumindo a liderança) e retomada do servidor falho (com ele reconhecendo a liderança do outro).

- Server 3 (*leader*) falha
- Server 2 vira *candidate*
- Server 2 recebe voto de 1 e 5 (e vira *leader*), e de 4
- Server 3 é retomado e recebe *AppendEntry* de 2 (que é o novo *leader*)
- Server 1, 3, 4 e 5 continuam como *follower* indefinidamente, pois 2 é *leader*

Na Figura 3, foi apresentado uma captura de tela de um funcionamento com falha de uma instância (o *leader*), agora sem retomada do servidor falho. Note que outro servidor assume a liderança.

- Server 1 (leader) falha
- Server 3 vira *candidate*
- Server 3 recebe voto de 4 e 2 (e vira *leader*), e de 3 e 5
- Server 2, 4 e 5 continuam como *follower*, pois 3 é *leader*

```
isabelle@isabelle-Inspiron-5448: ~/Graduacao/hirata-juliana-CES-27/Lab4/src/labRaft/run 78x21
2019/10/07 10:23:34 [CANDIDATE] Run Logic.
2019/10/07 10:23:34 [FOLLOWER] Resetting election timeout.
2019/10/07 10:23:34 [FOLLOWER] Accept AppendEntry from 'localhost:3001'.
2019/10/07 10:23:34 [FOLLOWER] Run Logic.
2019/10/07 10:23:34 [CANDIDATE] Vote granted by 'localhost:3002'.
2019/10/07 10:23:36 [CANDIDATE] VoteCount: 2
2019/10/07 10:23:36 [CANDIDATE] Vote denied to 'localhost:3003' for term '1'.
2019/10/07 10:23:36 [CANDIDATE] Run Logic.
2019/10/07 10:23:36 [CANDIDATE] Running for term '2'.
2019/10/07 10:23:36 [CANDIDATE] Vote granted by 'localhost:3003'.
2019/10/07 10:23:36 [CANDIDATE] VoteCount: 2
2019/10/07 10:23:36 [CANDIDATE] Vote granted by 'localhost:3004'.
2019/10/07 10:23:36 [CANDIDATE] VoteCount: 3
2019/10/07 10:23:36 [LEADER] Becoming leader.
2019/10/07 10:23:36 [LEADER] Run Logic.
^Csignal: interrupt
isabelle@isabelle-Inspiron-5448 ~/Graduacao/hirata-juliana-CES-27/Lab4/src/l

isabelle@isabelle-Inspiron-5448: ~/Graduacao/hirata-juliana-CES-27/Lab4/src/labRaft/run 78x
2019/10/07 10:23:39 [FOLLOWER] Resetting election timeout.
2019/10/07 10:23:39 [FOLLOWER] Accept AppendEntry from 'localhost:3001'.
2019/10/07 10:23:39 [FOLLOWER] Run Logic.
2019/10/07 10:23:39 [FOLLOWER] Resetting election timeout.
2019/10/07 10:23:39 [FOLLOWER] Accept AppendEntry from 'localhost:3001'.
2019/10/07 10:23:39 [FOLLOWER] Run Logic.
2019/10/07 10:23:41 [FOLLOWER] Update old term '2' to new term '3' from 'local
host:3003'.
2019/10/07 10:23:41 [FOLLOWER] Resetting election timeout.
2019/10/07 10:23:41 [FOLLOWER] Vote accepted to 'localhost:3003' for term '3'.
2019/10/07 10:23:41 [FOLLOWER] Run Logic.
2019/10/07 10:23:41 [FOLLOWER] Resetting election timeout.
2019/10/07 10:23:41 [FOLLOWER] Accept AppendEntry from 'localhost:3003'.
2019/10/07 10:23:41 [FOLLOWER] Run Logic.
2019/10/07 10:23:41 [FOLLOWER] Resetting election timeout.
2019/10/07 10:23:41 [FOLLOWER] Accept AppendEntry from 'localhost:3003'.
isabelle@isabelle-Inspiron-5448: ~/Graduacao/hirata-juliana-CES-27/Lab4/src/labRaft/run 78x
2019/10/07 10:23:39 [FOLLOWER] Run Logic.
2019/10/07 10:23:39 [FOLLOWER] Resetting election timeout.
2019/10/07 10:23:39 [FOLLOWER] Accept AppendEntry from 'localhost:3001'.
2019/10/07 10:23:39 [FOLLOWER] Run Logic.
2019/10/07 10:23:41 [FOLLOWER] Election timeout.
2019/10/07 10:23:41 [CANDIDATE] Run Logic.
2019/10/07 10:23:41 [CANDIDATE] Running for term '3'.
2019/10/07 10:23:41 [CANDIDATE] Vote granted by 'localhost:3004'.
2019/10/07 10:23:41 [CANDIDATE] VoteCount: 2
2019/10/07 10:23:41 [CANDIDATE] Vote granted by 'localhost:3002'.
2019/10/07 10:23:41 [CANDIDATE] VoteCount: 3
2019/10/07 10:23:41 [CANDIDATE] Becoming leader.
2019/10/07 10:23:41 [LEADER] Run Logic.

isabelle@isabelle-Inspiron-5448: ~/Graduacao/hirata-juliana-CES-27/Lab4/src/labRaft/run 83x21
2019/10/07 10:23:39 [FOLLOWER] Resetting election timeout.
2019/10/07 10:23:39 [FOLLOWER] Accept AppendEntry from 'localhost:3001'.
2019/10/07 10:23:39 [FOLLOWER] Run Logic.
2019/10/07 10:23:39 [FOLLOWER] Resetting election timeout.
2019/10/07 10:23:39 [FOLLOWER] Accept AppendEntry from 'localhost:3001'.
2019/10/07 10:23:39 [FOLLOWER] Run Logic.
2019/10/07 10:23:39 [FOLLOWER] Resetting election timeout.
2019/10/07 10:23:39 [FOLLOWER] Accept AppendEntry from 'localhost:3001'.
2019/10/07 10:23:39 [FOLLOWER] Run Logic.
2019/10/07 10:23:41 [FOLLOWER] Update old term '2' to new term '3' from 'localhost:
3003'.
2019/10/07 10:23:41 [FOLLOWER] Resetting election timeout.
2019/10/07 10:23:41 [FOLLOWER] Vote accepted to 'localhost:3003' for term '3'.
2019/10/07 10:23:41 [FOLLOWER] Run Logic.
2019/10/07 10:23:41 [FOLLOWER] Resetting election timeout.
2019/10/07 10:23:41 [FOLLOWER] Accept AppendEntry from 'localhost:3003'.
2019/10/07 10:23:41 [FOLLOWER] Run Logic.
2019/10/07 10:23:41 [FOLLOWER] Resetting election timeout.
2019/10/07 10:23:41 [FOLLOWER] Accept AppendEntry from 'localhost:3003'.
2019/10/07 10:23:41 [FOLLOWER] Run Logic.
```

Figura 3. Funcionamento após a falha no *leader*.

Na Figura 4, foi apresentado uma captura de tela de um funcionamento com falha de duas instâncias, também sem retomadas dos servidores falhos. Note que outro servidor assume a liderança.

- Server 1 (*leader*) falha
- Server 3 vira *candidate*
- Server 3 recebe voto de 4 e 2 (e vira *leader*)
- Server 3 (*leader*) falha
- Server 4 vira *candidate*
- Server 4 recebe voto de 2 e 5 (e vira *leader*)
- Server 5 continua como *follower*, pois 4 é *leader*

Na Figura 5, foi apresentado uma captura de tela de um funcionamento com falha de três instâncias, também sem retomadas dos servidores falhos. Note que o sistema não consegue mais decidir por um novo *leader*.

- Server 1 (*leader*) falha
- Server 5 vira *candidate*
- Server 5 recebe voto de 3 e 4 (e vira *leader*), e de 2
- Server 5 (*leader*) falha
- Server 3 vira *candidate*
- Server 3 recebe voto de 4 e 2 (e vira *leader*)
- Server 3 (*leader*) falha
- Server 4 vira *candidate*
- Server 4 recebe voto de 2
- Server 4 não virará *leader*, pois só teve 2 votos (o de 2 e o dele mesmo)
- Server 2 continua indefinidamente como *follower* (sem nenhum *leader*)


```

isabelle@isabelle-Inspiron-5448: ~/Graduacao/hirata-juliana-CES-27/Lab4/src/labRaft/run 78x
2019/10/07 10:28:44 [CANDIDATE] Run Logic.
2019/10/07 10:28:44 [CANDIDATE] Running for term '1'.
2019/10/07 10:28:44 [CANDIDATE] Vote granted by 'localhost:3002'.
2019/10/07 10:28:44 [CANDIDATE] VoteCount: 2
2019/10/07 10:28:46 [CANDIDATE] Vote denied to 'localhost:3004' for term '1'.
2019/10/07 10:28:46 [CANDIDATE] Run Logic.
2019/10/07 10:28:46 [CANDIDATE] Running for term '2'.
2019/10/07 10:28:46 [CANDIDATE] Vote granted by 'localhost:3003'.
2019/10/07 10:28:46 [CANDIDATE] VoteCount: 2
2019/10/07 10:28:46 [CANDIDATE] Vote granted by 'localhost:3002'.
2019/10/07 10:28:46 [CANDIDATE] VoteCount: 3
2019/10/07 10:28:46 [CANDIDATE] Becoming leader.
2019/10/07 10:28:46 [LEADER] Run Logic.
^Csignal: interrupt
isabelle@isabelle-Inspiron-5448 ~/Graduacao/hirata-juliana-CES-27/Lab4/src/L

isabelle@isabelle-Inspiron-5448: ~/Graduacao/hirata-juliana-CES-27/Lab4/src/labRaft/run 78x
2019/10/07 10:28:56 [FOLLOWER] Resetting election timeout.
2019/10/07 10:28:56 [FOLLOWER] Accept AppendEntry from 'localhost:3003'.
2019/10/07 10:28:56 [FOLLOWER] Run Logic.
2019/10/07 10:28:56 [FOLLOWER] Resetting election timeout.
2019/10/07 10:28:56 [FOLLOWER] Accept AppendEntry from 'localhost:3003'.
2019/10/07 10:28:56 [FOLLOWER] Run Logic.
2019/10/07 10:28:59 [FOLLOWER] Update old term '4' to new term '5' from 'localhost:3004'.
2019/10/07 10:28:59 [FOLLOWER] Resetting election timeout.
2019/10/07 10:28:59 [FOLLOWER] Vote accepted to 'localhost:3004' for term '5'.
2019/10/07 10:28:59 [FOLLOWER] Run Logic.
2019/10/07 10:29:02 [FOLLOWER] Update old term '5' to new term '6' from 'localhost:3004'.
2019/10/07 10:29:02 [FOLLOWER] Resetting election timeout.
2019/10/07 10:29:02 [FOLLOWER] Vote accepted to 'localhost:3004' for term '6'.
2019/10/07 10:29:02 [FOLLOWER] Run Logic.

isabelle@isabelle-Inspiron-5448: ~/Graduacao/hirata-juliana-CES-27/Lab4/src/labRaft/run 78x
2019/10/07 10:28:53 [FOLLOWER] Accept AppendEntry from 'localhost:3005'.
2019/10/07 10:28:53 [FOLLOWER] Run Logic.
2019/10/07 10:28:54 [FOLLOWER] Election timeout.
2019/10/07 10:28:54 [CANDIDATE] Run Logic.
2019/10/07 10:28:54 [CANDIDATE] Running for term '4'.
2019/10/07 10:28:54 [CANDIDATE] Vote granted by 'localhost:3004'.
2019/10/07 10:28:54 [CANDIDATE] VoteCount: 2
2019/10/07 10:28:54 [CANDIDATE] Vote granted by 'localhost:3002'.
2019/10/07 10:28:54 [CANDIDATE] VoteCount: 3
2019/10/07 10:28:54 [CANDIDATE] Becoming leader.
2019/10/07 10:28:54 [LEADER] Run Logic.
^Csignal: interrupt
isabelle@isabelle-Inspiron-5448 ~/Graduacao/hirata-juliana-CES-27/Lab4/src/L

isabelle@isabelle-Inspiron-5448: ~/Graduacao/hirata-juliana-CES-27/Lab4/src/labRaft/run 83x26
2019/10/07 10:28:56 [FOLLOWER] Run Logic.
2019/10/07 10:28:56 [FOLLOWER] Resetting election timeout.
2019/10/07 10:28:56 [FOLLOWER] Accept AppendEntry from 'localhost:3003'.
2019/10/07 10:28:56 [FOLLOWER] Run Logic.
2019/10/07 10:28:56 [FOLLOWER] Resetting election timeout.
2019/10/07 10:28:56 [FOLLOWER] Accept AppendEntry from 'localhost:3003'.
2019/10/07 10:28:56 [FOLLOWER] Run Logic.
2019/10/07 10:28:56 [FOLLOWER] Resetting election timeout.
2019/10/07 10:28:56 [FOLLOWER] Accept AppendEntry from 'localhost:3003'.
2019/10/07 10:28:56 [FOLLOWER] Run Logic.
2019/10/07 10:28:56 [FOLLOWER] Resetting election timeout.
2019/10/07 10:28:56 [FOLLOWER] Accept AppendEntry from 'localhost:3003'.
2019/10/07 10:28:56 [FOLLOWER] Run Logic.
2019/10/07 10:28:56 [FOLLOWER] Resetting election timeout.
2019/10/07 10:28:56 [FOLLOWER] Accept AppendEntry from 'localhost:3003'.
2019/10/07 10:28:56 [FOLLOWER] Run Logic.
2019/10/07 10:28:56 [FOLLOWER] Resetting election timeout.
2019/10/07 10:28:56 [FOLLOWER] Accept AppendEntry from 'localhost:3003'.
2019/10/07 10:28:56 [FOLLOWER] Run Logic.
2019/10/07 10:28:59 [FOLLOWER] Election timeout.
2019/10/07 10:28:59 [CANDIDATE] Run Logic.
2019/10/07 10:28:59 [CANDIDATE] Running for term '5'.
2019/10/07 10:28:59 [CANDIDATE] Vote granted by 'localhost:3002'.
2019/10/07 10:28:59 [CANDIDATE] VoteCount: 2
2019/10/07 10:29:02 [CANDIDATE] Election timeout.
2019/10/07 10:29:02 [CANDIDATE] Run Logic.
2019/10/07 10:29:02 [CANDIDATE] Running for term '6'.
2019/10/07 10:29:02 [CANDIDATE] Vote granted by 'localhost:3002'.
2019/10/07 10:29:02 [CANDIDATE] VoteCount: 2

isabelle@isabelle-Inspiron-5448: ~/Graduacao/hirata-juliana-CES-27/Lab4/src/labRaft/run 83x20
2019/10/07 10:28:47 [FOLLOWER] Resetting election timeout.
2019/10/07 10:28:47 [FOLLOWER] Accept AppendEntry from 'localhost:3001'.
2019/10/07 10:28:47 [FOLLOWER] Run Logic.
2019/10/07 10:28:47 [FOLLOWER] Resetting election timeout.
2019/10/07 10:28:47 [FOLLOWER] Accept AppendEntry from 'localhost:3001'.
2019/10/07 10:28:47 [FOLLOWER] Run Logic.
2019/10/07 10:28:47 [FOLLOWER] Resetting election timeout.
2019/10/07 10:28:47 [FOLLOWER] Accept AppendEntry from 'localhost:3001'.
2019/10/07 10:28:47 [FOLLOWER] Run Logic.
2019/10/07 10:28:47 [FOLLOWER] Resetting election timeout.
2019/10/07 10:28:47 [FOLLOWER] Accept AppendEntry from 'localhost:3001'.
2019/10/07 10:28:47 [FOLLOWER] Run Logic.
2019/10/07 10:28:51 [FOLLOWER] Election timeout.
2019/10/07 10:28:51 [CANDIDATE] Run Logic.
2019/10/07 10:28:51 [CANDIDATE] Running for term '3'.
2019/10/07 10:28:51 [CANDIDATE] Vote granted by 'localhost:3003'.
2019/10/07 10:28:51 [CANDIDATE] VoteCount: 2
2019/10/07 10:28:51 [CANDIDATE] Vote granted by 'localhost:3004'.
2019/10/07 10:28:51 [CANDIDATE] VoteCount: 3
2019/10/07 10:28:51 [CANDIDATE] Becoming leader.
2019/10/07 10:28:51 [LEADER] Run Logic.
^Csignal: interrupt
isabelle@isabelle-Inspiron-5448 ~/Graduacao/hirata-juliana-CES-27/Lab4/src/labRaft

```

Figura 5. Funcionamento após a falha no terceiro *leader*. Note que o sistema não consegue mais decidir por um novo *leader*.