

Team Decided – Raft Consensus

Inception Iteration Plan 4 - Starting 23/04/2018

1. Key Milestones

Milestone	Date
Iteration Start	23/04/2018
Complete TDD for RaftNetworking + Security	28/04/2018
Complete TDD for Raft-DistributedLog	28/04/2018
Complete TDD for Raft-NodeInfo	28/04/2018
Complete TDD for Raft-Messages	28/04/2018
Complete design/diagramming/TDD for Raft Consensus + API	28/04/2018
Implement Raft Networking non-event driven	05/05/2018
Implement Raft Networking event driven	05/05/2018
Implement Raft Networking security	05/05/2018
Iteration End	06/05/2018

2. High-level Objectives

ID	Objective	Date
1	Complete TDD for RaftNetworking + Security	28/04/2018
2	Complete TDD for Raft-DistributedLog	28/04/2018
3	Complete TDD for Raft-NodeInfo	28/04/2018
4	Complete TDD for Raft-Messages	28/04/2018
5	Complete design/diagramming/TDD for Raft Consensus + API	28/04/2018
6	Implement Raft Networking non-event driven	05/05/2018
7	Implement Raft Networking event driven	05/05/2018
8	Implement Raft Networking security	05/05/2018

3. Evaluation Criteria

Obj. ID	Evaluation Criteria
1	Have completed the TDD for RaftNetworking + Security
2	Have completed the TDD for Raft-DistributedLog
3	Have completed the TDD for Raft-NodeInfo
4	Have completed the TDD for Raft-Messages
5	Have completed the design/diagramming/TDD for Raft Consensus + API
6	Have completed the Raft Networking non-event driven code
7	Have completed the Raft Networking event driven code
8	Have completed the Raft Networking security code

4. Work Item Assignments

State:

C – Complete

P – In Progress

W – Waiting to start

Work ID	Name or keywords	Outcome	State	Assigned to	Est (hrs)	Act (hrs)	Left (hrs)
1.1	Complete TDD for RaftNetworking + Security	RaftNetworking complete, Security still to go, and it's TDD	P	Joshua	6:00	16:00	6:00
2.1	Complete TDD for Raft-DistributedLog	Did not start	W	Sean	2:00	0:00	2:00
3.1	Complete TDD for Raft-NodeInfo	Did not start	W	Joshua	2:00	0:00	2:00
4.1	Complete TDD for Raft-Messages	Completed	C	Sean	4:00	2:00	0:00
5.1	Complete design/diagramming/TDD for Raft Consensus + API	Completed design/diagramming, TDD left to go	P	Joshua	8:00	22:00	20:00
6.1	Implement Raft Networking non-event driven	Will not do	C	Sean	6:00	0:00	0:00
7.1	Implement Raft Networking event driven	Completed, and bug tested	C	Sean	4:00	15:00	0:00
8.1	Implement Raft Networking security	Almost finished, things to clean up	P	Joshua	8:00	20:00	5:00
Totals					40:00	75:00	35:00

5. Issues

Issue	Status	Notes
TDD found bugs that we didn't think existed	Closed	Took extra time to complete, 12 hours total extra work to finish RaftNetworking
Again, poor estimation of time to do things	Ongoing	We need to estimate and then double!
Too optimistic about additional features	Closed	We had to move some of the features which we wanted to include in the prototype to a Dream List, that we'll go through later in the project if we have time. Example: Non-event based implementation, fitness selection for leader, start/stop for networking class (decided on IDisposable instead)
TDD estimates took longer than expected as we had to learn tools	Closed	In the future we should think about adding an additional separate work item to learn about tools, or allocate it extra time
TDD tests need to be tested	Closed	During implementation you find bugs in the design, so these come out during TDD, or even later in implementation. So we should keep an eye out for allowing time for testing the tests as well after implementation.

6. Assessment

Assessment target	Inception Iteration 4	
Assessment date	05/05/2018	
Participants	All - Joshua and Sean	
Project status	Orange Again, we ran out of time to complete the desired work. Also, our estimates, although more accurate, were blown out by complications during the work. We expect to catch up in our next iteration.	
Assessment against objectives	Objective	Result
	Complete TDD for RaftNetworking + Security	RaftNetworking complete, Security still to go, and it's TDD
	Complete TDD for Raft-DistributedLog	Did not start
	Complete TDD for Raft-NodeInfo	Did not start
	Complete TDD for Raft-Messages	Completed
	Complete design/diagramming/TDD for Raft Consensus + API	Completed design/diagramming, TDD left to go
	Implement Raft Networking non-event driven	Will not do
	Implement Raft Networking event driven	Completed, and bug tested
	Implement Raft Networking security	Almost finished, things to clean up