



Decentralized Control flow:

- i. Async-re.py is used to set the job descriptions and launch the BigJob.py(BigJob Manager) which posts the job description to the advert service.
- ii. As and when a BigJob becomes active, BigJob.py launches the BigJob agents.
- iii. The bigjob agents poll for jobs in the advert server and allocate the resources to the subjobs
- iv. The subjob in this case is the replica agent. The replica agents are now launched
- v. The replica agents launch their respective replicas and monitor them
- vi. the replica agent collects the results and posts them to the advert server.
- vii. the replica agents also query the advert server and if they find a matching replica, they negotiate an exchange
- viii. the async-re.py continuously queries/ updates the exchange count and when the required number of exchanges complete, the experiment ends.

Time for each step:

- 1: 2 seconds
- 2: 1 second
- 3: partial queue time  
(waits till the BJs get active)
- 4: 1.5 seconds per job
- 5: included in 4
- 6: 0.3 seconds
- 7: run time
- 8: 0.5 seconds
- 9: included in 8
- 10: 1 sec
- 11: 1 second
- 12: 0.3 sec0nds