

CSE535: Distributed Systems

Phase 4 - Twins : BFT Systems Made Robust

Team Name: Server Side Squad

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USER MANUAL

Extension of DiemBFT Manual of Team : Loyal Byzantine Generals

- DistAlgo Installation :
 - Follow <https://github.com/DistAlgo/distalgo/> to see the steps to install DistAlgo in the system.
- Known system-specific issues :
 - For macOS, If the message size exceeds the threshold specified by the system for UDP, the system will throw an error "OSError(40, 'Message too long')".
 - Execute **sudo sysctl -w net.inet.udp.maxdgram=65535** to increase the limit.
- Configuration and output for diem bft simulation :
 - Ledger File: For each configuration at index '\$c' mentioned in the configuration file, each validator with index '\$v' running scenario with index '\$s' creates its own ledger file under 'ledgers/config\$c/scenario\$s/validator_\$v.ledger'
 - Log File: For each configuration at index '\$c' mentioned in the configuration file, each validator with index '\$v' running scenario with index '\$s' creates its own log file under 'logs/config\$c/scenario\$s/validator_\$v.log'.
- Commands to execute in sequence :
 - `cd <path_of_project_folder>/src`
 - `python3 scenarios_generator.py`
 - `python3 -m da --message-buffer-size 65535 run_diembft.da`

To run a specific testcase:

1. Run the scenario generator.
2. Check the scenarios folder in src to see the config_id.json files which are the testcases corresponding to each configuration.

3. Choose the json file containing the testcase of your choice. Json file is a list of testcases, so if we want to see the result of a single case, we can isolate that testcase in config_1.json and run run_diembft.da as specified in the third command above.
4. We planned to provide arguments which take parameters in and run the test cases, but because of time constraints, we had to resort to 3.