BlockchainProjects

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Roadmap for worker 2017-08-infrastructure 25.07.2018

Milestones Deliverables:

1. Maintain deployed infrastructure from previous worker

   According to description and constraints of previous infrastructure worker

2. Deploy public uptime tracking
   a. Evaluation of different possibilities (custom uptime robot, metricbeat, …)
   b. Deployment in alignment with the existing stats pages
3. Switching to premium SSL certificates for all infrastructure nodes
   a. Obtain Premium SSL certificates for every subdomain (not one wildcard)
4. Setup of ES databases, cluster configuration and feeding through bitshares-core
   a. Configure every backend node to feed the ES cluster (pending completion by core development team)
   b. Direct access to ES cluster (read-only) through

      elasticsearch.bitshares.ws
      elasticsearch.testnet.bitshares.ws

   c. Access to ES python wrapper through

      wrapper.elasticsearch.bitshares.ws
      Wrapper.elasticsearch.testnet.bitshares.ws

   Please note that for point b. and c. it might be necessary to deploy the subdomains [eu|us|sg] to avoid unnecessary traffic costs, this will be decided during deployment. The ES database for the testnet will not be a cluster.

5. Development of automated deployment and execution of stress-testing
   a. Stress beacon

i. Develop a light-weight python that is remote controllable. Remote features include (no guarantee for completeness)
   1. Configure the BitShares accounts to be involved in the transactions and backend node to be used
   2. Create and sign transaction for later broadcasting that contain an arbitrary amount and random operations. Amount of operations per transaction and distribution of the operation type is configurable
   3. Broadcast previously signed transaction to configured node at a given tx/s rate (can be unlimited)
   4. Report on client-side statistics: server CPU load, failed broadcasts, connectivity issues. This can be either directly back to the overseer or to a third monitoring entity

ii. Create a docker container for easy deployment

b. Stress overseer

   Develop a python frontend that allows managing and control of all beacons

6. Development of proper frontend for monitoring stress testing
   a. Deploy Kibana for the ES testnet monitoring
7. Manage, execute the stress test
   a. Deploy multiple stress beacons and one overseer, and if required additional testnet nodes
   b. Execute various scenaria
      i. Real user activity

         Most likely only one operation per transaction, incoming transactions more or less distributed equally accross nodes, mostly transfer and limit order

      ii. Maximum throughput
         1. Transactions with single transfer incoming on multiple nodes
         2. Transactions with single limit orders incoming on multiple nodes
         3. Transactions with single transfer incoming on only one node
         4. Transactions with many transfers incoming on multiple nodes

      iii. P2P limit (might be already proven with maximum throughput)

         Transactions with so many operations to reach the 2MB limit incoming on multiple nodes

8. Create in-depth stress test report

Timeline

2018-07-infrastructure		2018												
		JUL				**AUG**				**SEP**				
Deliverables	**Duration**	W1	W2	W3	W4	W1	W2	W3	W4	W1	W2	W3	W4	W1
	current time	🟦	🟦	🟦	🟦									
Milestone 1														
Maintenance as before														
Milestone 2 (Public uptime tracking)	**2 w**						▒	▒						
Evaluation	1 w						🟩							
Deployment	1 w							🟩						
Milestone 3 (Premium SSL)	**1 w**								▒					
Switch certificates	1 w								🟩					
Milestone 4 (ES Cluster)	**3 w**						▒	▒	▒					
Configuration and inhouse test	2 w						🟩	🟩						
Deployment	1 w								🟩					
Milestone 5 and 6 (Stress test dev)	**5 w**				▒	▒	▒	▒	▒					
Development beacon	3 w				🟩	🟩	🟩							
Development overseer	3 w						🟩	🟩	🟩					
Milestone 7 and 8 (Stress test exec)	**4 w**								▒	▒	▒	▒		
Server setup and configuration	1 w								🟩	🟩				
Execution	2 w									🟩	🟩			
Reporting	2 w										🟩	🟩		
Annotations						Bitfest on the 22.09.						🟦		

Please note that the durations are merely giving indicating the time period in which the underlying deliverable. It is not indicating the required workload.