

The screenshot shows a web browser window displaying the Voldemort project website. The browser has several tabs open, including 'voldemort cluster', 'Quick Start - Voldemort', 'voldemort.java', 'voldemort', 'Writing own client', 'GitHub - voldemort', 'tcp://localhost:6666', 'postman - Google', 'Postman | Super...', and 'Postman | Super...'. The website content includes a sidebar with links like 'Download', 'Releases', 'Configuration', 'Build and Push', 'Rebalancing', 'Admin Tool', 'Avro Schema Evolution', 'Javadoc', 'Developer Info', 'Fun Projects', 'Performance', 'Bugs', and 'Wiki'. The main content area shows 'Step 2: Start single node cluster' and 'Step 3: Start commandline test client and do some operations'. A terminal window is open on the right, showing the execution of the Voldemort server and client commands.

Step 2: Start single node cluster

```
bin/voldemort-server.sh config/single_node_cluster > /tmp/voldemort.log &
```

Note: If your machine has a very small memory(<4G, likely to happen in Virtual Machine environments), you may come across out-of-memory issues. You can reduce the JVM heap memory allocation by changing the "-Xmx2G" option in bin/voldemort-server.sh to a smaller value or leave it out.

Step 3: Start commandline test client and do some operations

```
bin/voldemort-shell.sh test tcp://localhost:6666
Established connection to test via tcp://localhost:6666
> put "hello" "world"
> get "hello"
version(0:1): "world"
> delete "hello"
> get "hello"
null
> help
...
> exit
k k thx bye.
```

More details

Client

Here is an example showing how to connect to a store as a client to do reads and writes from Java:

```
String bootstrapUrl = "tcp://localhost:6666";
StoreClientFactory factory = new SocketStoreClientFactory(new ClientConfig().setBootstrapUrls(bootstrapUrl));

// create a client that executes operations on a single store
StoreClient<String, String> client = factory.getStoreClient("my_store_name");

getStoreClient() method pulls down the metadata (cluster.xml/stores.xml) from the server in the bootstrap url. After initializing the store client for every store once we can reuse it to run our queries as follows:

// do some random pointless operations
Versioned<String> value = client.get("some_key");
value.setObject("some_value");
client.put("some_key", value);
```

Note that StoreClient is just an interface, so for the purpose of unit testing we can completely mock the storage layer. This is something that is essentially impossible to do with a normal relational db since sql is the interface and it is vendor specific.

Terminal Output:

```
utsav@RiakVM: ~/Desktop/voldemortnosql/voldemort
FailedDetector threshold=95
FailedDetector threshold_count_minimum=30
FailedDetector threshold_interval=300000
FailedDetector threshold_async_recovery_interval=10000
Fetch all stores xml in bootstrap=true
Idle connection timeout minutes=-1
[main]
[23:44:22,189 voldemort.client.AbstractStoreClientFactory] INFO Client zone-id [
-1] Attempting to get raw store [voldsys$metadata.version.persistence] [main]
Established connection to test via [tcp://localhost:6666]
>
> get "name"
version(0:3) ts:1509517600286: "{vgfdsgf}"
>
> put "name" "utsav"
> put "address" "190 Ryland Street"
> get "name"
version(0:4) ts:1509518684749: "utsav"
> delete "address"
> get "address"
null
>
```