## 区域回放

区域回放是按照区域范围，一次请求该区域内某个时间段的所有船舶轨迹点数据。

### 命令函数

输入：<http://192.168.1.81:8080/REST/rest/ship/get?time=2016-08-10> 12:12:12&minutes=60&range=38.99352,117.91851,38.95332,117.91096,38.91846,118.13274,38.87017,118.23299,38.87657,118.28913,38.93183,118.29599,38.96078,118.29874,38.97530,118.24467,38.99352,117.91851

|  |  |  |
| --- | --- | --- |
| **名称** | **属性标识** | **备注** |
| 开始时间 | time | 获取船舶轨迹点的开始时间，格式必须为yyyy-MM-dd HH:mm:ss |
| 分钟数 | minutes | 从开始时间往后增加的分钟数 |
| 区域经纬度 | range | 必须是按顺时针或逆时针方向书写，第一个点需要在最后重复出现一次 |

表格 1 区域回放获取函数命令

### 返回结果

返回的Json结果：

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **名称** | **类型** | **长度** | **属性标识** | **备注** |
| 通信标识码 | **uint32** | 4 | mmsi |  |
| 信号来源 | **uint32** | 4 | source |  |
| 服务器当前时间 | **string** |  | utc |  |
| 经度 | **Uint32** | 4 | lon |  |
| 维度 | **uint32** | 4 | lat |  |
| 对地速率 | **uint32** | 4 | sog | 毫米/秒, [0,52576] |
| 对地航向 | **uint32** | 4 | cog | 1/100度, [0-36000] |
| 船首向 | **uint32** | 4 | hdg | 1/100度, [0-36000] |
| 旋转角速度 | **uint32** | 4 | rot | 1/100度/秒, [-1200,1200] |
| 航行状态 | **uint32** | 4 | navistatus | 0:在航, 1:锚泊, 2:失控, 3:操纵受限,4:吃水受限,5:靠泊,6:搁浅,7:捕捞作业,8:靠船帆提供动力,其他值为未知 |

表格 2 区域回放返回结果-Json

返回的Json结果：

|  |
| --- |
| {"data":[  //mmsi为100879042的船舶轨迹点//  {"mmsi":100879042,"source":15,"utc":"2016-08-10 12:15:27","lon":118.032158,"lat":38.978765,"sog":4166,"cog":32570,"hdg":51100,"rot":-128,"navistatus":15},  //mmsi为357911000的船舶轨迹点//  {"mmsi":357911000,"source":0,"utc":"2016-08-10 12:12:51","lon":118.081753,"lat":38.932828,"sog":2006,"cog":28210,"hdg":28400,"rot":0,"navistatus":0},  {"mmsi":357911000,"source":0,"utc":"2016-08-10 12:18:50","lon":118.072053,"lat":38.934487,"sog":3910,"cog":28290,"hdg":28400,"rot":0,"navistatus":0},  {"mmsi":357911000,"source":7,"utc":"2016-08-10 12:23:04","lon":118.061208,"lat":38.936403,"sog":3550,"cog":28330,"hdg":28500,"rot":0,"navistatus":0},  {"mmsi":357911000,"source":0,"utc":"2016-08-10 12:27:50","lon":118.053778,"lat":38.937733,"sog":1440,"cog":28280,"hdg":28500,"rot":0,"navistatus":0},  {"mmsi":357911000,"source":0,"utc":"2016-08-10 12:44:09","lon":118.041938,"lat":38.939582,"sog":977,"cog":28320,"hdg":28300,"rot":0,"navistatus":0},  //mmsi为412013000的船舶信息//  {"mmsi":412013000,"source":0,"utc":"2016-08-10 12:54:33","lon":118.258273,"lat":38.91014,"sog":0,"cog":16320,"hdg":26400,"rot":0,"navistatus":1},…]} |

表格 3 区域船舶返回结果-json

**1.1.3并发测试结果**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 范围 | 38.99352,117.91851,38.95332,117.91096,38.91846,118.13274,38.87017,118.23299,38.87657,118.28913,38.93183,118.29599,38.96078,118.29874,38.97530,118.24467,38.99352,117.91851 | | | |
| 请求方式 | 并发线程数 | 开始时间 | 分钟数 | 返回时长（秒） |
| POST/GET | 30 | 2016-12-10 12:12:12 | 60 | 3 |
| POST/GET | 30 | 2015-12-12 12:12:12 | 60 | 3 |
| POST/GET | 30 | 2015-12-10 12:12:12 | 60 | 3 |
| POST/GET | 30 | 2016-12-10 00:12:12 | 60 | 3 |
| POST/GET | 30 | 2016-05-10 12:12:12 | 60 | 3 |
| POST/GET | 30 | 2016-05-10 00:12:12 | 60 | 3 |
| POST/GET | 28 | 2016-08-10 12:12:12 | 60 | 3 |
| POST/GET | 27 | 2016-08-10 00:12:12 | 60 | 3 |