

Google Groups

Issuing commands from a shore-side application to a vehicle

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Posted in group: **Technical Q&A**

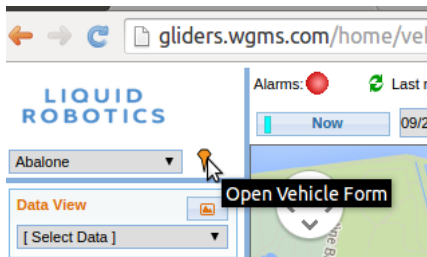
I'd like to issue commands to a vehicle from a shore-side application and get responses back: how can this be done?

Answer

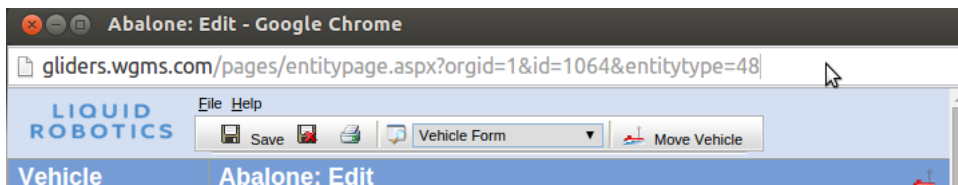
WGMS provides a web services interface that allows commands to be created and results to be obtained, given a few pieces of information as well as a valid user e-mail and p.

- vehicle ID
- internal name of the org
- communications channel to be used

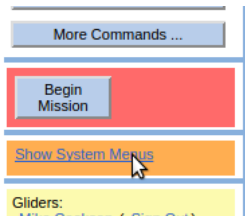
The vehicle ID and the org ID can be obtained by looking at the URL of the vehicle form.



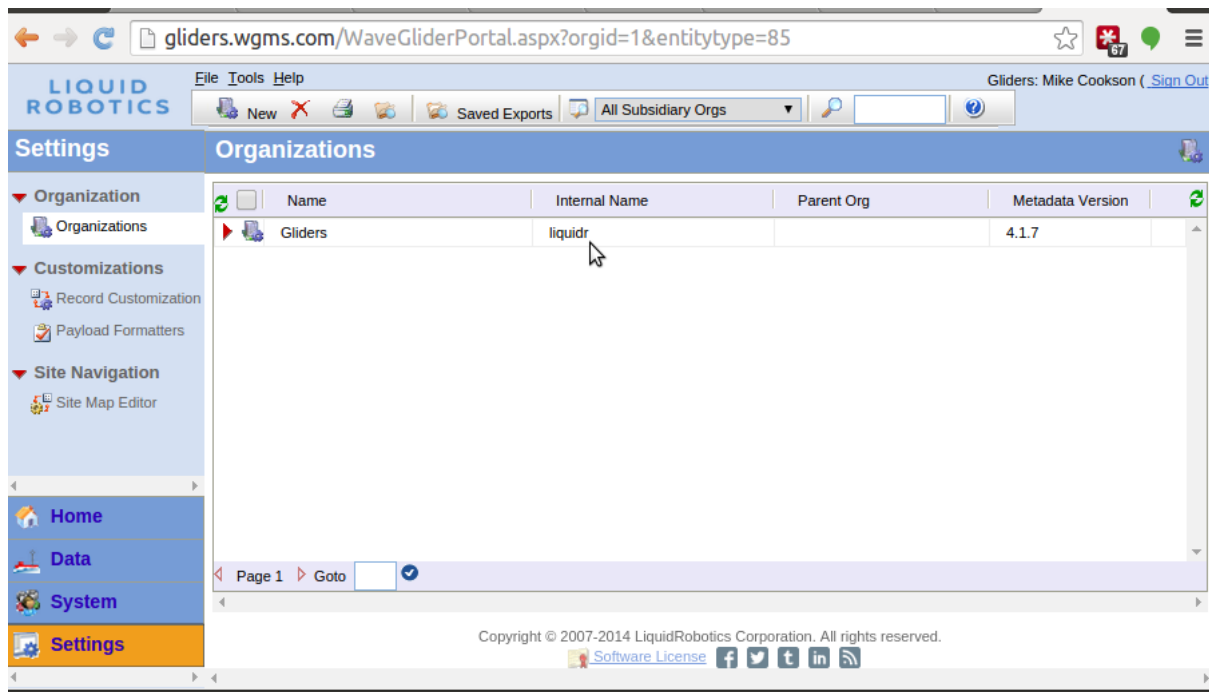
Click the icon next to the WGMS vehicle selection drop-down to bring up vehicle form.



In the example, the org ID is 1 and the vehicle ID (id) is 1064.



The internal name of the org can be found by clicking the "Show system menus" link, then selecting the Settings tab and inspecting the value in the Internal Name column of the Organization



In this case, the internal name is "liquidr"

The communications channel should be one of the following:

- 1 for Iridium
- 2 for XBee (SV2 only)
- 33 for Virtual Relay Cellular modems

The script "wcs" script (attached) was written for Linux, but can serve as an example of how to issue a command and look for responses. The script uses parameter values in "s

```
EMAIL="road.runner@acme.com"
PASSWORD="b1rD533d"
ORGID=1
ORGNAME=lriops
VEHICLEID=1064
COMMCHANNEL=33
```

The script is invoked with the command to execute as a parameter (I'm assuming it's going to board address 0; that can be specified by tweaking the script.) Here's an example

```
$ wcs "runshell date"
```

```
*** Reading variables from settings.txt
```

```
Credentials are missing
```

```
*** Logging in
```

```
*** Starting runshell date command for vehicle ID 1064 on comm channel 33
```

```
Un-encoded XML entity fields:
```

```
<CommandName>Automated script</CommandName><Payload_String>Write Console Script</Payload_String><CommandType>37120</CommandType><VehicleId>
```

```
SOAP message:
```

```
<?xml version="1.0" encoding="utf-8"?><soap:Envelope xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema" xr
<entityFieldXml>%3Centity%3E%3CCommandName%3EAutomated%20script%3C%2FCommandName%3E%3CPayload_String%3EWrite%20Console%20Script%3C%
</CreateEntity></soap:Body></soap:Envelope>
```

```
Output:
```

```
<?xml version="1.0" encoding="utf-8"?><soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/" xmlns:xsi="http://www.w3.org/2001/XMLSchema-inst
```

```
Entity: 1998731
```

```
*** Reading status of entity 1998731 (timesleft=59)
```

```
Command Status: 1
```

```
*** Reading status of entity 1998731 (timesleft=58)
```

```
Command Status: 2
```

```
*** Reading status of entity 1998731 (timesleft=57)
```

```
Command Status: 2
```

```
*** Reading status of entity 1998731 (timesleft=56)
```

```
Command Status: 3
```



```

<Table1 diffgr:id="Table11" msdata:rowOrder="0" diffgr:hasChanges="inserted">
  <VehicleCommandId>1998845</VehicleCommandId>
  <CommandName>Automated script</CommandName>
  ... excess removed ...
  <CommandType>37120</CommandType>
  <CommandStatus>status ID</CommandStatus>
  <TargetWaypointId />
  <FromWaypointId />
  ... excess removed ...
</Table1>
</NewDataSet>
</diffgr:diffgram>
</DataSet>

```

Continue polling until status ID >= 3 or until the amount of time you want to wait has expired, delaying at least 10 seconds between polls. In the end, if you time out of the result

4. Get the results

Like the CreateEntity command that was used to create the command entity, GetRelatedEntitySet uses XML to describe which fields are interesting and a SOAP envelope to contain the results.

```

<columns><column type='id'>VehicleRawOutputId</column><column type='bound'>IMEI</column><column type='bound'>StructureType</column>

```

The SOAP envelope is completed as follows, URL escaping the column XML:

```

<?xml version="1.0" encoding="utf-8"?><soap:Envelope xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema"

```