



REST Service API Resources

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Overview

This document describes the **Representational State Transfer (REST)** web services available to interact with the inthinc.com web application. Following standard REST conventions, all API calls are executed as HTTP request/response operations. The data being accessed is specified in the URL. The HTTP method indicates the type of operation being performed:

- POST - Create
- GET - Read
- PUT - Update
- DELETE - Delete

In general, READ and DELETE operations don't require a body in the HTTP request. Any parameters required are on the URL. The exception to this rule are bulk DELETE operations, where the XML list of IDs are included in the payload. CREATE and UPDATE operations always require XML to be submitted in the body of the request of content type application/xml.

The REST web service exposes several resources in the web application summarized in the following table.

Resource	Methods Available	Description
Account	GET	View an account to manage your fleet. Media types: application/xml
Person	GET,PUT,POST,DELETE	Create, view, update, or delete a person. Media types: application/xml, application/JSON
User	GET,PUT,POST,DELETE	Create, view, update, or delete a user of the system. Media types: application/xml, application/JSON
Driver	GET,PUT,POST,DELETE	Create, view, update, or delete a driver. Media types: application/xml, application/JSON
Driver collection	GET,PUT,POST,DELETE	Create, view, update, or delete a collection of drivers. Media types: application/xml, application/JSON
Vehicle	GET,PUT,POST,DELETE	Create, view, update, or delete a vehicle. Media types: application/xml, application/JSON
Vehicle collection	GET,PUT,POST,DELETE	Create, view, update, or delete a collection of vehicles. Media types: application/xml, application/JSON



Device	GET,PUT,POST,DELETE	Create, view, update, or delete a device. Media types: application/xml, application/JSON
Device collection	GET,PUT,POST,DELETE	Create, view, update, or delete a collection of devices. Media types: application/xml, application/JSON
Event collection	GET	View events. Media types: application/xml, application/JSON
Red flag collection	GET	View red flag events. Media types: application/xml, application/JSON

1 Authentication and Permissions

To use any request a user must be a registered user in the system and must have "Admin" role. REST web services use basic HTTP authentication.

2 Service API URIs

Use https:// and the host and port that was supplied to you and add the path and parameters as specified below. An example is:

<https://my.inthinc.com/service/api/vehicles>

See [Data Dictionary](#) for the formats for data in request bodies and response entities.

3.1 Account

Operation	Request Path	Method	Media Type	Request Body	Response Entity	Example
Get account	/service/api/account/{id}	GET	application/xmlapplication/json		Account	https://my.inthinc.com/service/api/account/1

3.2 Person

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Operation	Request Path	Method	Media Type	Request Body	Response Entity	Example
Create person	/service/api/person	POST	application/xmlapplication/json	Person	Person	https://my.inthinc.com/service/api/person
Update person	/service/api/person	PUT	application/xmlapplication/json	Person - include only properties to be updated, must include the personID	Person	https://my.inthinc.com/service/api/person
Delete person	/service/api/person/{id}	DELETE	application/xmlapplication/json	Person		https://my.inthinc.com/service/api/person/1
Get person	/service/api/person/{id}	GET	application/xmlapplication/json		Person	https://my.inthinc.com/service/api/person/1
Get all persons	/service/api/persons	GET	application/xmlapplication/json		Collection of Persons	https://my.inthinc.com/service/api/persons
Create persons	/service/api/persons	POST	application/xmlapplication/json	Collection of Persons	Collection of requests for Persons	https://my.inthinc.com/service/api/persons
Update persons	/service/api/persons	PUT	application/xmlapplication/json	Collection of Persons	Collection of requests for Persons	https://my.inthinc.com/service/api/persons
Delete persons	/service/api/persons	DELETE	application/xmlapplication/json	Collection of Persons		https://my.inthinc.com/service/api/persons

3.3 User

Operation	Request Path	Method	Media Type	Request Body	Response Entity	Example
Create user	/service/api/user	POST	application/xmlapplication/json	User	User	https://my.inthinc.com/service/api/user
Update user	/service/api/user	PUT	application/xmlapplication/json	User - include only properties to be updated, must include the userID	User	https://my.inthinc.com/service/api/user
Delete user	/service/api/user/{id}	DELETE	application/xmlapplication/json	User		https://my.inthinc.com/service/api/user/1
Get user	/service/api/user/{id}	GET	application/xmlap		User	https://my.inthinc.com/service/api/user/1

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			plication/json			
Get user by username	/service/api/user/{userName}	GET	application/xml application/json		User	https://my.inthinc.com/service/api/user/cjohnson
Get all users	/service/api/users	GET	application/xml application/json		Collection of Users	https://my.inthinc.com/service/api/users
Create users	/service/api/users	POST	application/xml application/json	Collection of Users	Collection of requests for Users	https://my.inthinc.com/service/api/users
Update users	/service/api/users	PUT	application/xml application/json	Collection of Users	Collection of requests for Users	https://my.inthinc.com/service/api/users
Delete users	/service/api/users	DELETE	application/xml application/json	Collection of Users		https://my.inthinc.com/service/api/persons
Log in	/service/api/login/{userName}/{password}	GET	application/xml application/json		User	https://my.inthinc.com/service/api/login/myusername/mypassword

3.4 Driver

Operation	Request Path	Method	Media Type	Request Body	Response Entity	Example
Create driver	/service/api/driver	POST	application/xml application/json	Driver	Driver	https://my.inthinc.com/service/api/driver
Update driver	/service/api/driver	PUT	application/xml application/json	Driver - include only properties to be updated, must include the driverID	Driver	https://my.inthinc.com/service/api/driver
Delete driver	/service/api/driver/{id}	DELETE	application/xml application/json	Driver	Driver	https://my.inthinc.com/service/api/driver/1
Get driver	/service/api/driver/{id}	GET	application/xml application/json		Driver	https://my.inthinc.com/service/api/driver/1
Get all drivers	/service/api/drivers	GET	application/xml application/json		Collection of Drivers	https://my.inthinc.com/service/api/drivers
Create drivers	/service/api/drivers	POST	application/xml application/json	Collection of Drivers	Collection of requests for Drivers	https://my.inthinc.com/service/api/drivers



Update drivers	/service/api/drivers	PUT	application/xml application/json	Collection of Drivers	Collection of requests for Drivers	https://my.inthinc.com/service/api/drivers
Delete drivers	/service/api/drivers	DELETE	application/xml application/json	Collection of Drivers		https://my.inthinc.com/service/api/drivers
Get driver's last location	/service/api/driver/{id}/location	GET	application/xml application/json		Location	https://my.inthinc.com/service/api/driver/1/location
Get driver's last trip	/service/api/driver/{id}/trip	GET	application/xml application/json		Trip	https://my.inthinc.com/service/api/driver/1/trip
Get driver's trips by date	/service/api/driver/{id}/trips/{date}	GET	application/xml application/json		Collection of Trips	https://my.inthinc.com/service/api/driver/1/trips/20110801
Get driver's score	/service/api/driver/{id}/score/{numberOfDays}	GET	application/xml application/json		Score	https://my.inthinc.com/service/api/driver/1/score/30
Get driver's trend	/service/api/driver/{id}/trend/{numberOfDays}	GET	application/xml application/json		Trend	https://my.inthinc.com/service/api/driver/1/trend/30

Note: Possible values for {numberOfDays} are: 30, 90, 180, and 360.

3.5 Vehicle

Operation	Request Path	Method	Media Type	Request Body	Response Entity	Example
Create vehicle	/service/api/vehicle	POST	application/xml application/json	Vehicle	Vehicle	https://my.inthinc.com/service/api/vehicle
Update vehicle	/service/api/vehicle	PUT	application/xml application/json	Vehicle - include only properties to be updated, must include the vehicleID	Vehicle	https://my.inthinc.com/service/api/vehicle
Delete vehicle	/service/api/vehicle/{id}	DELETE	application/xml application/json		Vehicle	https://my.inthinc.com/service/api/vehicle/1



			n			
Get vehicle	/service/api/vehicle/{id}	GET	application/xml application/json		Vehicle	https://my.inthinc.com/service/api/vehicle/1
Get vehicle by VIN	/service/api/vehicle/vin/{vin}	GET	application/xml application/json		Vehicle	https://my.inthinc.com/service/api/vehicle/vin/12345678901234567
Get all vehicles	/service/api/vehicles	GET	application/xml application/json		Collection of Vehicles	https://my.inthinc.com/service/api/vehicles
Create vehicles	/service/api/vehicles	POST	application/xml application/json	Collection of Vehicles	Collection of requests for vehicles	https://my.inthinc.com/service/api/vehicles
Update vehicles	/service/api/vehicles	PUT	application/xml application/json	Collection of Vehicles	Collection of requests for vehicles	https://my.inthinc.com/service/api/vehicles
Delete vehicles	/service/api/vehicles	DELETE	application/xml application/json	Collection of Vehicles		https://my.inthinc.com/service/api/vehicles
Get vehicle's last location	/service/api/vehicle/{id}/lastlocation	GET	application/xml application/json		Location	https://my.inthinc.com/service/api/vehicle/1/lastlocation
Get vehicle's last trip	/service/api/vehicle/{id}/trip	GET	application/xml application/json		Trip	https://my.inthinc.com/service/api/vehicle/1/trip
Get vehicle's trips	/service/api/vehicle/{id}/trips/{date}	GET	application/xml application/json		Collection of Trips	https://my.inthinc.com/service/api/vehicle/1/trips/20110801
Get vehicle's score	/service/api/vehicle/{id}/score/{numberOfDays}	GET	application/xml application/json		Score	https://my.inthinc.com/service/api/vehicle/1/score/30
Get vehicle's trend	/service/api/vehicle/{id}/trend/{numberOfDays}	GET	application/xml application/json		Trend	https://my.inthinc.com/service/api/vehicle/1/trend/30
Assign device	/service/api/vehicle/{id}	GET	application/xml		Vehicle	https://my.inthinc.com/service/api/vehicle/1/deviceid/30

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	/deviceid/{deviceid}		application/json			
Assign driver	/service/api/vehicle/{id}/driverid/{driverid}	GET	application/xml application/json		Vehicle	https://my.inthinc.com/service/api/vehicle/1/driverid/30

Note: Possible values for {numberOfDays} are: 30, 90, 180, and 360.

3.6 Device

Operation	Request Path	Method	Media Type	Request Body	Response Entity	Example
Create device	/service/api/device	POST	application/xml application/json	Device	Device	https://my.inthinc.com/service/api/device
Update device	/service/api/device	PUT	application/xml application/json	Device - include only properties to be updated, must include the deviceID	Device	https://my.inthinc.com/service/api/device
Delete device	/service/api/device/{id}	DELETE	application/xml application/json	Device		https://my.inthinc.com/service/api/device/1
Get device	/service/api/device/{id}	GET	application/xml application/json		Device	https://my.inthinc.com/service/api/device/1
Get all devices	/service/api/devices	GET	application/xml application/json		Collection of Devices	https://my.inthinc.com/service/api/devices
Create devices	/service/api/devices	POST	application/xml application/json	Collection of Devices	Collection of requests for Devices	https://my.inthinc.com/service/api/devices
Update devices	/service/api/devices	PUT	application/xml application/json	Collection of Devices	Collection of requests for	https://my.inthinc.com/service/api/devices



			n		Devices	
Delete devices	/service/api/devices	DELETE	application/xml application/json	Collection of Devices		https://my.inthinc.com/service/api/devices
Get device by imei	/service/api/device/imei/{imei}	GET	application/xml application/json		Device	https://my.inthinc.com/service/api/device/imei/{123456788}
Get device by serial number	/service/api/device/serialnum/{serialnum}	GET	application/xml application/json		Device	https://my.inthinc.com/service/api/device/serialnum/{123456788}

3.7 Group

Operation	Request Path	Method	Media Type	Request Body	Response Entity	Example
Create group	/service/api/group	POST	application/xml application/json	Group	Group	https://my.inthinc.com/service/api/group
Update group	/service/api/group	PUT	application/xml application/json	Group - include only properties to be updated, must include the groupID	Group	https://my.inthinc.com/service/api/group
Delete group	/service/api/group/{id}	DELETE	application/xml application/json	Group		https://my.inthinc.com/service/api/group/1
Get group	/service/api/group/{id}	GET	application/xml application/json		Group	https://my.inthinc.com/service/api/group/1
Get all groups	/service/api/groups	GET	application/xml application/json		Collection of Groups	https://my.inthinc.com/service/api/groups



			n			
Get driver scores for group	/service/api/group/{groupID}/scores/drivers/{numberOfDays}	GET	application/xml application/json		Collection of Scores	https://my.inthinc.com/service/api/group/1/scores/drivers/30
Get driver scores for group by month	/service/api/group/{groupID}/scores/drivers/month/{month}	GET	application/xml application/json		Collection of Scores	https://my.inthinc.com/service/api/group/1/scores/drivers/month/December
Get vehicle scores for group	/service/api/group/{groupID}/scores/vehicles/{numberOfDays}	GET	application/xml application/json		Collection of Scores	https://my.inthinc.com/service/api/group/1/scores/vehicles/30
Get drivers' names for group	/service/api/group/{groupID}/drivernames	GET	application/xml application/json		Collection of names	https://my.inthinc.com/service/api/group/1/drivernames
Get vehicles' names for group	/service/api/group/{groupID}/vehiclenames	GET	application/xml application/json		Collection of names	https://my.inthinc.com/service/api/group/1/vehiclenames
Get trends for subgroups	/service/api/group/{groupID}/subgroups/trends/driver/{numberOfDays}	GET	application/xml application/json		Collection of trends	https://my.inthinc.com/service/api/group/1/subgroups/trends/driver/30
Get scores for subgroups	/service/api/group/{groupID}/subgroups/scores/driver/{numberOfDays}	GET	application/xml application/json		Collection of scores	https://my.inthinc.com/service/api/group/1/subgroups/scores/driver/30
Get score for subgroups by month	/service/api/group/{groupID}/subgroups/scores/driver/month/{month}	GET	application/xml application/json		Collection of scores	https://my.inthinc.com/service/api/group/1/subgroups/scores/driver/month/December
Get drivers' locations by group	/service/api/group/{groupID}/driverlocations	GET	application/xml, application/json		Collection of last locations for drivers	https://my.inthinc.com/service/api/group/46/driverlocations

Note: Possible values for {numberOfDays} are: 30, 90, 180, and 360.



3.8 Last Locations

Operation	Request Path	Method	Media Type	Request Body	Response Entity	Example
Get vehicle's last location	/service/api/vehicle/{id}/lastlocation	GET	application/xml,application/json		Vehicle's last location	https://my.inthinc.com/service/api/vehicle/1/lastlocation
Get driver's last location	/service/api/driver/{driverID}/lastlocation	GET	application/xml,application/json		Driver's last location	https://my.inthinc.com/service/api/driver/1/lastlocation
Get drivers' locations by group	/service/api/group/{groupID}/driverlocations	GET	application/xml,application/json		Collection of last locations for drivers	https://my.inthinc.com/service/api/group/46/driverlocations
Get vehicles' location by group	/portal_service/v1/api/vehicle/group/{groupID}/lastlocations	GET	application/xml,application/json		Collection of last locations v1 for vehicles	https://my.inthinc.com/portal_service/v1/api/vehicle/group/46/lastlocations
Get vehicles' location by group and after date	/portal_service/v1/api/vehicle/group/{groupID}/lastlocationsafter	GET	application/xml,application/json		Collection of last locations v1 for vehicles	https://my.inthinc.com/portal_service/v1/api/vehicle/group/46/lastlocationsafter?date=2013-11-01T00:00:00Z



3.9 Event

Operation	Request Path	Method	Media Type	Request Body	Response Entity	Example
Get event counts	/service/api/group/{groupID}/events/{noteTypes:all .*/}/{startDate}/{endDate}/count	GET	text/*		Integer	https://my.inthinc.com/service/api/group/1/events/all/20110717/20110815/count
Get events	/service/api/{entity:driver vehicle group}/{entityID}/events/{eventTypes:all .*/}/{startDate}/{endDate}/{page}	GET	application/xml application/json		Collection of Events, rels to previous and next page	https://my.inthinc.com/service/api/driver/1/events/all/20110717/20110815

3.10 Red Flags

Operation	Request Path	Method	Media Type	Request Body	Response Entity	Example
Get red flag counts	/service/api/group/{groupID}/redflags/count/{startDate}/{endDate}	GET	text/*		Count of red flags	https://my.inthinc.com/service/api/group/3713/redflags/count/20131105/20131108
Get red flags	/service/api/group/{groupID}/redflags/1/20/{startDate}/{endDate}	GET	application/xml application/json		Collection of red flags	https://my.inthinc.com/service/api/group/3713/redflags/1/30/20131105/20131108
Get red flags by driver's groupID and minutes back from current time	/portal_service/api/driver/group/{groupID}/redflags/{minutesBack}	GET	application/xml application/json		Collection of red flags v1	https://my.inthinc.com/portal_service/v1/api/driver/group/3709/redflags?minutes=1440
Get red flags by driverID and minutes back from current time	/portal_service/api/driver/{driverID}/redflags/{minutesBack}	GET	application/xml application/json		Collection of red flags v1	https://my.inthinc.com/portal_service/v1/api/driver/group/3709/redflags?minutes=1440



Get red flags by vehicle's groupID and minutes back from current time	/portal_service/api/vehicle/group/{groupID}/redflags/{minutesBack}	GET	application/xml application/json		Collection of red flags v1	https://my.inthinc.com/portal_service/v1/api/vehicle/group/3709/redflags?minutes=1440
Get red flags by vehicleID and minutes back from current time	/portal_service/api/vehicle/{vehicleID}/redflags/{minutesBack}	GET	application/xml application/json		Collection of red flags v1	https://my.inthinc.com/portal_service/v1/api/vehicle/group/3709/redflags?minutes=1440

3.11 Hours of Service Violations

Operation	Request Path	Method	Media Type	Request Body	Response Entity	Example
Get hours of service violations	/service/api/group/{id}/hos/violations/{startDate}/{endDate}	GET	application/xml		Collection of Hours of Service violations	https://my.inthinc.com/service/api/group/46/hos/violations/20111211/20111217

3.12 Form Submissions (DVIR Pre-trip Forms, Post-trip Forms, and Ad-hoc Forms)

Operation	Request Path	Method	Media Type	Request Body	Response Entity	Example
Get submitted form data	/forms_service/submissions/{triggerType}/{startDate}/{endDate}/{groupID}	GET	application/json	triggerType=<1=PRE_TRIP, 2=POST_TRIP, 3=ROAD_HAZARD> startDate =	Collection of form data	http://dev.tiwipro.com:8080/forms_service/submissions/1/2012-08-21/2012-08-22/4971

				<code><yyyy-mm-dd></code> <code>endDate =</code> <code><yyyy-mm-dd></code> <code>groupID =</code> <code><groupID></code>		
Request (get) to the forms server to request a specific submission that matches a red flag defined by the timestamp and the vehicleID.	<code>/forms_service/submission/{timestamp}/{vehicleID}</code>	GET	application/json	<code>timestamp =</code> <code><timestamp on submission></code> <code>vehicleID =</code> <code><vehicleID></code>	Collection of form data	<code>http://dev.tiwipro.com:8080/forms_service/submission/1232343454/1</code>

3.13 Text Messages

Operation	Request Path	Method	Media Type	Request Body	Response Entity	Example
Get text messages sent by the specified driver within the specified number of minutes back (1 to 1440).	<code>/portal_service/v1/api/driver/{driverID}/textmessages?minutes={minutes}</code>	GET	application/xml application/json		Collection of SentTextMessage	<code>https://my.inthinc.com/portal_service/v1/api/driver/123/textmessages?minutes=1440</code>
Send a text message to	<code>/portal_service/v1/api/driver/</code>	POST	application/xml application/json	TextMessage		<code>https://my.inthinc.com/portal_service/v1/api/driver/123/textmessage</code>



the specified driver.	{driverID}/textmessage					
Get text messages sent by the specified vehicle within the specified number of minutes back (1 to 1440).	/portal_service/v1/api/vehicle/{vehicleID}/textmessages?minutes={minutes}	GET	application/xml application/json		Collection of SentTextMessage	https://my.inthinc.com/portal_service/v1/api/vehicle/123/textmessages?minutes=1440
Send a text message to the specified vehicle.	/portal_service/v1/api/vehicle/{vehicleID}/textmessage	POST	application/xml application/json	TextMessage		https://my.inthinc.com/portal_service/v1/api/vehicle/123/textmessage

3.14 Quality Rest

Operation	Request Path	Method	Media Type	Request Body	Response Entity	Example
Get quality rest blocks for the specified driver from the specified start date and number of 30 minute increments.	/portal_service/v1/api/driver/{driverID}/qualityresthours?fromdate={fromDate}&increments={totalIncrements}	GET	application/xml application/json		Collection of QualityRest	https://my.inthinc.com/portal_service/v1/api/driver/78309/qualityresthours?fromdate=2013-11-01T00Z&increments=24
Get quality rest blocks for the specified group of	/portal_service/v1/api/driver/{driverID}/qualityresthours?fromdate={fromDate}&increments={totalIncrements}	GET	application/xml application/json		Collection of QualityRest	https://my.inthinc.com/portal_service/v1/api/driver/group/7900/qualityresthours?fromdate=2013-11-01T00Z&increments=24

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drivers from the specified start date and number of 30 minute increments.						
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3.15 Hours of Service

Operation	Request Path	Method	Media Type	Request Body	Response Entity	Example
Get current hours of service data for the specified driver.	/portal_service/v1/api/driver/{driverID}/hoursofservice	GET	application/xml application/json		Collection of HOSHours	https://my.inthinc.com/portal_service/v1/api/driver/78309/hoursofservice

3.16 Timeline

Operation	Request Path	Method	Media Type	Request Body	Response Entity	Example
Get timeline data for the specified driver.	/portal_service/v1/api/driver/{driverID}/timeline	GET	application/xml application/json		Timeline	https://my.inthinc.com/portal_service/v1/api/driver/78309/timeline

3.16 Stops



Operation	Request Path	Method	Media Type	Request Body	Response Entity	Example
Get stops for the specified driver.	portal_service/v1/api/driver/{driverID}/stops	GET	application/xml application/json		Collection of DriverStop	https://my.inthinc.com/portal_service/v1/api/driver/78309/stops

4 Status Codes

Code	Meaning	Returned When
200 201	OK	The request completed successfully
401	Unauthorized	The request could not be authorized. The appropriate authentication information was not provided.
400	Bad Request	The resource could not be completed because the data sent in the entity body of the request was bad, as determined by the service.
403	Forbidden	The request could not be completed because the client submitting the request was not authorized to access resources referenced by this request. Ensure all IDs refer to valid records that you are authorized to access. Also ensure your login credentials are correct.



404	Not found	The resource at the specified URL does not exist.
405	Method Not Allowed	The requested method is not available.
500	Internal Server Error	A service error prevented the operation from executing. (This contains a stack trace with what failed)
501	Not Implemented	The server does not support the functionality required to fulfill the request.

5 Data Dictionary

5.1 Account

XML

```
<account>
  <modified>2011-08-05T14:26:10-06:00</modified>
  <accountID>123456</accountID>
  <acctName>inthinc</acctName>
  <addressID>184550301</addressID>
  <hos>HOS_SUPPORT</hos>
  <props>
    <noReplyEmail/>
    <passwordChange>0</passwordChange>
    <passwordStrength>0</passwordStrength>
    <phoneAlertsActive>1</phoneAlertsActive>
    <supportContact1/>
    <supportContact2/>
    <supportContact3/>
    <supportContact4/>
    <supportContact5/>
    <supportContacts/>
    <supportContacts/>
  </props>
</account>
```

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```
<supportContacts/>
<supportContacts/>
<supportContacts/>
<waySmart>true</waySmart>
<wmsLayerQueryParam/>
<wmsLayers/>
<wmsQuery/>
<wmsURL/>
</props>
<status>ACTIVE</status>
<unkDriverID>1111111</unkDriverID>
<zonePublishDate>2011-07-22T00:00:00-06:00</zonePublishDate>
</account>
```

JSON

Properties

Property	In/Out	Type	Required	Unique	Description
modified	Response	Date String			Date and time record was last modified
accountID	Response	Integer		Unique System ID	Unique system assigned ID
acctName	Response	String			Account name



addressID	Response	Integer			Id of address record
hos	Response	enum NONE (default) HOS_SUPPORT EUROPEAN_HOS_SUPPORT			Date and time record was last modified
props	Response	Account Attributes			Date and time record was last modified
status	Response	enum ACTIVE (default) INACTIVE			Date and time record was last modified
unkDriverID	Response	Integer		Unique System ID	Special ID to use for the Unknown Driver
zonePublishDate	Response	Date String			Date zones were last published.

5.2 Person

XML

```
<person>
  <modified>2011-05-02T21:26:05-06:00</modified>
  <acctID>12</acctID>
  <addressID>226</addressID>
  <crit>0</crit>
  <driver>
    <modified>2011-05-02T21:26:05-06:00</modified>
    <certifications/>
    <dot>NON_DOT</dot>
    <driverID>280</driverID>
    <expiration>1969-12-31T17:00:00-07:00</expiration>
    <groupID>48</groupID>
    ><personID>294</personID>
    <status>ACTIVE</status>
```



```
</driver>
<empid>jhoward</empid>
<first>Jacqueline</first>
<fuelEfficiencyType>MPG_US</fuelEfficiencyType>
<height>0</height>
<info>0</info>
<last>Howard</last>
<locale>en_US</locale>
<measurementType>ENGLISH</measurementType>
<middle/>
<personID>294</personID>
<priEmail>jhoward@inthinc.com</priEmail>
<priPhone>8017127234</priPhone>
<priText/>
<reportsTo/>
<secEmail/>
<secPhone/>
<secText/>
<status>ACTIVE</status>
<suffix/>
<timeZone>US/Mountain</timeZone>
<title/>
<user>
  <modified>2011-06-28T14:57:29-06:00</modified>
  <groupID>41</groupID>
  <lastLogin>2011-06-28T14:57:29-06:00</lastLogin>
  <password>encrypted password</password>
  <personID>294</personID>
  <roles>
    <role>23</role>
    <role>24</role>
  </roles>
  <status>ACTIVE</status>
  <userID>111</userID>
  <username>jhoward</username>
</user>
```



```
<warn>0</warn>
<weight>0</weight>
</person>
```

JSON

```
{
  "address":null,
  "first":"Jacqueline",
  "timeZone":{
    "rawOffset":-25200000,
    "dstsavings":3600000,
    "lastRuleInstance":{
      "rawOffset":-25200000,
      "dstsavings":3600000,
      "displayName":"Mountain Standard Time",
      "id":"US/Mountain"},
    "dirty":false,
    "displayName":"Mountain Standard Time",
    "id":"US/Mountain"},
  "last":"Howard",
  "info":0,
  "locale":{
    "language":"en",
    "country":"US",
    "displayCountry":"United States",
    "displayLanguage":"English",
    "displayName":"English (United States)",
    "displayVariant":"",
    "iso3Country":"USA",
    "iso3Language":"eng",
    "variant":""},
  "status":"ACTIVE",
```

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```
"suffix": "",
"fullName": "Jacqueline Howard ",
"driver": {
  "state": null,
  "expiration": 0,
  "status": "ACTIVE",
  "driverID": 280,
  "person": null,
  "personID": 294,
  "groupID": 48,
  "barcode": null,
  "rfid1": null,
  "rfid2": null,
  "licenseClass": null,
  "dot": "NON_DOT",
  "license": null,
  "certifications": "",
  "created": null,
  "modified": 1304393165000},
"height": 0,
"title": "",
"user": {
  "roles": [23, 24],
  "username": "jhoward",
  "status": "ACTIVE",
  "password": "encrypted password",
  "userID": 111,
  "person": null,
  "personID": 294,
  "groupID": 41,
  "accessPoints": null,
  "lastLogin": 1309294649000,
  "passwordDT": null,
  "created": null,
  "modified": 1309294649000},
"driverID": 280,
```




```
"acctID":12,
"userID":111,
"accountID":12,
"measurementType":"ENGLISH",
"fuelEfficiencyType":"MPG_US",
"priEmail":"jhoward@inthinc.com",
"addressID":226,
"personID":294,
"empid":"jhoward",
"warn":0,
"crit":0,
"secEmail": "",
"priPhone":"8017127234",
"secPhone": "",
"priText": "",
"secText": "",
"dob":null,
"weight":0,
"fullNameWithPriEmail":"Jacqueline Howard [ jhoward@inthinc.com ]",
"fullNameWithPriPhone":"Jacqueline Howard [ 8017127234 ]",
"displayTimeZone":"Mountain Daylight Time",
"reportsTo": "",
"dept":null,
"fullNameLastFirst":"Howard,Jacqueline ",
"fullNameWithId":"Jacqueline Howard (jhoward)",
"fullNameWithSecPhone":"Jacqueline Howard ",
"middle": "",
"gender":null,
"created":null,
"modified":1304393165000}
```

Properties

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Property	In/Out	Type	Required	Unique	Description
personID	Request Response	Integer	Required when updating via PUT	Unique System ID	Unique ID assigned by the system on creation
address	Request Response	Address			
first	Request Response	String	Required		First name
last	Request Response	String	Required		Last name
suffix	Request Response	String			eg jr, sr, MBA
timeZone	Request Response	Timezone String	Required		See Timezones for all supported timezones
info	Request Response	String			
locale	Request Response	String			See Locales for all supported locales
status	Request Response	enum ACTIVE (default) INACTIVE			Person is active in the system.
driverID	Request Response	Integer	Required when updating driver record via PUT	Unique System ID	ID of driver record associated with this person. Person must have a driver and/or a user record.
userID	Request Response	Integer	Required when updating user record via PUT	Unique System ID	ID of user record associated with this person. Person must have a driver and/or a user record.
acctID	Request Response	Integer	Required	Unique System ID	ID of account record associated with this person



measure mentType	Request Response	enum ENGLISH (default) METRIC	Required		Measurement system all amounts will be expressed in.
fuelEfficie ncyType	Request Response	enum MPG_US (default with ENGLISH) miles per American gallon MPG_UK miles per UK gallon KMPL kilometers per liter (Default with METRIC) LP100KM liters per 100 kilometers	Required		Units for fuel usage
priEmail	Request Response	String	Required when creating a User record	Unique	Primary email address
empid	Request Response	String	Required	Unique	Must be unique. Will be forced to upper case
warn	Request Response	Integer			
crit	Request Response	Integer			
secEmail	Request Response	String			secondary email address
priPhone	Request Response	String	Required when creating a User record		Primary phone number
secPhone	Request Response	String			Secondary phone number
priText	Request Response	String			Primary number for text messages
secText	Request Response	String			Secondary number for text messages
dob	Request Response	Date String			Date of birth



weight	Request Response	Integer			in units as defined by the measurement property
reportsTo	Request Response	String			Name of supervisor
dept	Request Response	String			department in company
middle	Request Response	String			Middle name
gender	Request Response	enum MALE FEMALE			
created	Response	Date String			Date person was created in the system
modified	Response	Date String			Date this record was last modified.

5.3 User

XML

```
<user>
  <modified>2011-06-28T14:57:29-06:00</modified>
  <groupID>41</groupID>
  <lastLogin>2011-06-28T14:57:29-06:00</lastLogin>
  <password>encrypted password</password>
  <personID>294</personID>
  <roles>
    <role>23</role>
    <role>24</role>
  </roles>
  <status>ACTIVE</status>
  <userID>111</userID>
  <username>jhoward</username>
</user>
```



JSON

```
{
  "roles": [23, 24],
  "username": "jhoward",
  "status": "ACTIVE",
  "password": "encrypted password",
  "userID": 111,
  "person": {
    "address": null,
    "first": "Jacqueline",
    "timeZone": {
      "rawOffset": -25200000,
      "dstSavings": 3600000,
      "lastRuleInstance": {
        "rawOffset": -25200000,
        "dstSavings": 3600000,
        "displayName": "Mountain Standard Time",
        "id": "US/Mountain"
      },
      "dirty": false,
      "displayName": "Mountain Standard Time",
      "id": "US/Mountain"
    },
    "last": "Howard",
    "info": 0,
    "locale": {
      "language": "en",
      "country": "US",
      "displayCountry": "United States",
      "displayLanguage": "English",
      "displayName": "English (United States)",
      "displayVariant": "",
      "iso3Country": "USA",
      "iso3Language": "eng",
      "variant": ""
    }
  }
}
```



```
"status": "ACTIVE",
"suffix": "",
"fullName": "Jacqueline Howard ",
"driver": null,
"height": 0,
"title": "",
"user": null,
"driverID": null,
"acctID": 12,
"userID": null,
"accountID": 12,
"measurementType": "ENGLISH",
"fuelEfficiencyType": "MPG_US",
"priEmail": "jhoward@inthinc.com",
"addressID": 226,
"personID": 294,
"empid": "jhoward",
"warn": 0,
"crit": 0,
"secEmail": "",
"priPhone": "8017127234",
"secPhone": "",
"priText": "",
"secText": "",
"dob": null,
"weight": 0,
"fullNameWithPriEmail": "Jacqueline Howard [ jhoward@inthinc.com ]",
"fullNameWithPriPhone": "Jacqueline Howard [ 8017127234 ]",
"displayTimeZone": "Mountain Daylight Time",
"reportsTo": "",
"dept": null,
"fullNameLastFirst": "Howard, Jacqueline ",
"fullNameWithId": "Jacqueline Howard (jhoward)",
"fullNameWithSecPhone": "Jacqueline Howard ",
"middle": "",
"gender": null,
```



```
"created":null,  
"modified":1304393165000},  
"personID":294,  
"groupID":41,  
"accessPoints":null,  
"lastLogin":1309294649000,  
"passwordDT":null,  
"created":null,  
"modified":1309294649000  
}
```

Properties

Property	In/Out	Type	Required	Unique	Description
created	Response	String			Date user record was created
roles	Request Response	String			List of role IDs that define permissions for the user
username	Request Response	String must be unique	Required	Unique	user name user uses to log in
status	Request Response	enum ACTIVE (default) INACTIVE			User is active and can log into the system.
password	Request Response	String	Required for POST		send as plain text in the create/update request. It is encrypted and will be displayed encrypted in responses
userID	Response	Integer	Required to update a user via PUT	Unique System ID	Unique ID assigned by the system on create. Used to reference the user in other records and in requests
groupID	Request	Integer	Required	Unique System ID	Unique ID of the group the user belongs to. Use the Group services to discover groupIDs

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	Response				
personID	Request Response	Integer	Required	Unique System ID	Unique ID of the person record this user is to be associated with. Use the Person services to discover personIDs
lastLogin	Response	Date String			Date when the user last logged in.
passwordDT	Response	Date String			Date when the user's password was last updated.

5.4 Driver

XML

```
<driver>
  <modified>2011-07-12T12:10:26-06:00</modified>
  <certifications></certifications>
  <dot>NON_DOT</dot>
  <driverID>13895</driverID>
  <expiration>1969-12-31T17:00:00-07:00</expiration>
  <groupID>1260</groupID>
  <personID>14844</personID>
  <status>ACTIVE</status>
  <fobID>0000164e59e6</fobID>
</driver>
```

JSON

```
"driver":{
  "state":null,
  "expiration":0,
  "status":"ACTIVE",
```




```
"driverID":13895,  
"status":"ACTIVE",  
"personID":14844,  
"groupID":1260,  
"barcode":null,  
"rfid1":null,  
"rfid2":null,  
"licenseClass":null,  
"dot":"NON_DOT",  
"license":null,  
"certifications": "",  
"created":null,  
"modified":1310494226000  
}
```

Properties

Property	In/Out	Type	Required	Unique	Description
driverID	Response	Integer	Required to update driver via PUT	Unique System ID	Unique driverID, allocated by the system on creation. Used to reference drivers in requests and other records
modified	Response	String			Date and time record was last modified
dot	Request Response	enum see DOT HOS Rule Sets			Determines which DOT HOS rule set the driver is under - waySmart only
status	Request Response	enum ACTIVE (default) INACTIVE			Driver is in active service
state	Request Response				State diver is licensed in.



		abbrev String (see States)			
		name String (see States)			
		stateID Integer (see States)			
license	Request Response	String max of 10 characters			Driver's license number
licenseClass	Request Response	String max 4 characters			Driver's license class
expiration	Request Response	Date String			Driver's license expiration date.
personID	Request Response	Integer	Required	Unique System ID	ID for matching person record, use to request person record
groupID	Request Response	Integer	Required	Unique System ID	ID for Fleet, Division, or Team. Get from requests for group data
barcode	Request Response	String		Unique	Barcode
rfid1	Request Response	Long		Unique	RFID
rfid2	Request Response	Long		Unique	RFID
certifications	Request Response	String			Driver's Certifications
fobID	Request Response	String		Unique	The one wire (dallas button) fobID

5.5 Vehicle



XML

```
<vehicle>
  <vehicleID>1</vehicleID>
  <modified>2011-05-05T10:40:38-06:00</modified>
  <color>red</color>
  <dot>PROMPT_FOR_DOT_TRIP</dot>
  <groupID>2227</groupID>
  <license>123456</license/>
  <make>Ford</make>
  <model>Explorer</model>
  <name>Ford Exp Transistor</name>
  <state>
    <abbrev>UT</abbrev>
    <name>Utah</name>
    <stateID>45</stateID>
  </state>
  <status>ACTIVE</status>
  <VIN>21111111111137730</VIN>
  <vtype>HEAVY</vtype>
  <year>2012</year>
  <weight>3600</weight>
  <odometer>121823</odometer>
</vehicle>
```

JSON

```
"vehicle":{
  "modified":"2011-05-05T10:40:38-06:00",
  "color": "",
```



```
{
  "deviceID":13301,
  "dot":"NON_DOT",
  "driverID":342,
  "groupID":8,
  "license":"","",
  "make":"fake",
  "model":"make",
  "name":"testing",
  "odometer":121823,
  "status":"ACTIVE",
  "VIN":"985465198165191DD",
  "vehicleID":8043,
  "vtype":"LIGHT",
  "year":2012
}
```

Properties

Property	In/Out	Type	Required	Unique	Description
modified	Response	String			Date and time record was last modified
vehicleID	Request Response	Integer	Required to update vehicle via PUT	Unique System ID	Unique vehicleID, allocated by the system on creation. Used to reference vehicles in requests and other records
name	Request Response	String must be unique	Required		The name of the vehicle. There is no restriction on the format of this, but will be used for searching, sorting, and filtering purposes.
dot	Request Response	enum NON_DOT (default) DOT PROMPT_FOR_DOT_TR IP			Determines when the vehicle is under DOT HOS rules - waySmart only



ifta	Request Response	Boolean false (default) true			If the vehicle is subject to IFTA - waySmart only
deviceID	Response	Integer		Unique System ID	The device currently assigned to this vehicle. Can be used to retrieve the device record
driverID	Response	Integer		Unique System ID	The driver currently assigned to this vehicle. Can be used to retrieve the driver record
groupID	Request Response	Integer	Required	Unique System ID	The fleet/division/team this vehicle is assigned to. Discover groupIDs using the group service
status	Request Response	enum ACTIVE (default) INACTIVE			Vehicle is in active service
VIN	Request Response	String must be 17 characters must be unique	Required	Unique	The vehicle's VIN
vtype	Request Response	enum LIGHT MEDIUM HEAVY	Required		Vehicle HOS type
odometer	Request Response	Integer	Required		Vehicle's odometer
state	Request Response	<div> <div>abbrev String (see States)</div> <div>name String (see States)</div> <div>stateID Integer (see States)</div> </div>			State vehicle is registered in.
make	Request Response	String	Required		The make of the vehicle. There is no restriction on the format of this, but for searching, sorting, and filtering purposes be consistent.



model	Request Response	String	Required		The model of the vehicle. There is no restriction on the format of this, but for searching, sorting, and filtering purposes be consistent.
year	Request Response	Integer	Required		The year of the vehicle
weight	Request Response	Integer			The weight of the vehicle in the units defined for the user.

5.6 Device

XML

```
<device>
  <modified>2009-03-06T18:50:02-07:00</modified>
  <accountID>12</accountID>
  <baseID>3</baseID>
  <deviceID>140</deviceID>
  <imei>011596000064018</imei>
  <name>011596000064018</name>
  <phone>4697336557</phone>
  <productVersion>TIWIPRO_R74</productVersion>
  <serialNum>unk140</serialNum>
  <sim>8901260760000852678</sim>
  <status>INACTIVE</status>
</device>
```

JSON

```
"device":{
  "name":"011596000064018",
  "status":"INACTIVE",
```



```
"vehicleID":null,  
"accountID":12,  
"deviceID":140,  
"phone":"4697336557",  
"waySmart":false,  
"imei":"011596000064018",  
"sim":"8901260760000852678",  
"productVersion":"TIWIPRO_R74",  
"textMsgReceiveCapable":false,  
"firmwareVersion":null,  
"gprsonly":false,  
"mcmid":null,  
"activated":null,  
"serialNum":"unk140",  
"baseID":3,  
"witnessVersion":null,  
"emuMd5":null,  
"crashTraceAppletCapable":false,  
"altimei":null,  
"created":null,  
"modified":1236390602000  
}
```

Properties

Property	In/Out	Type	Required	Unique	Description
deviceID	Response	Integer		Unique System ID	Unique deviceID, allocated by the system on creation. Used to reference deviceID in requests and other records
name	Request Response	String			User's unique name for this device



phone number	Request Response	String		Unique	Phone number associated with this device
imei	Request Response	String		Unique	imei associated with this device
sim	Request Response	String		Unique	sim card associated with this device
productVer	Request Response	enum UNKNOWN (default) TEEN WAYSMART TIWIPRO_R71 TIWIPRO_R74 (use this for tiwipro)			
textMsgReceiveCapable	Request Response	Boolean			sim card associated with this device
status	Request Response	enum NEW (default) ACTIVE INACTIVE			Device is in active service
vehicleID	Request Response	Integer		Unique System ID	Vehicle assigned to this device
firmwareVersion	Request Response	Integer			
gprsonly	Request Response	Boolean			
mcmid	Request Response	String		Unique	mcmid associated with this device
activated	Request Response	Date String			Date device was activated
serialNum	Request Response	String		Unique	
baseID	Request Response	Integer			
witnessVersion	Request Response	Integer			
emuMd5	Request Response	String			Check sum for emu data



crashTraceAppletCapable	Request Response	Boolean			
altimei	Request Response	String		Unique	
created	Response	Date String			Date device record was created in the system.
modified	Response	String			Date and time record was last modified

5.7 Groups

XML

```
<group>
  <accountID>12</accountID>
  <description>Initial top level group</description>
  <groupID>41</groupID>
  <managerID>242</managerID>
  <mapCenter>
    <lat>41.1678</lat>
    <lng>-112.015</lng>
  </mapCenter>
  <mapZoom>11</mapZoom>
  <name>inthinc, inc.</name>
  <parentID>0</parentID>
  <status>GROUP_ACTIVE</status>
  <type>FLEET</type>
  <zoneRev>62</zoneRev>
</group>
```

JSON



```
"group":{
  "address":null,
  "name":"inthinc, inc.",
  "type":"FLEET",
  "description":"Initial top level group",
  "status":"GROUP_ACTIVE",
  "mapCenter":{
    "lat":41.1678,
    "lng":-112.015},
  "accountID":12,
  "addressID":null,
  "groupID":41,
  "parentID":0,
  "mapZoom":11,
  "managerID":242,
  "mapLat":41.1678,
  "mapLng":-112.015,
  "zoneRev":62,
  "created":null,
  "modified":null
}
```

Properties

Property	In/Out	Type	Required	Unique	Description
created	Response	Date String			Date device record was created in the system.
modified	Response	String			Date and time record was last modified
groupID	Response	Integer	Required to update	Unique System ID	Unique id, allocated by the system on creation. Used to reference groups in requests and other records



			group via PUT		
address	Request Response	Address			Address for group
name	Request Response	String	Required		User's unique name for the group.
type	Request Response	enum FLEET DIVISION TEAM	Required		Type of group in the hierarchy.
description	Request Response	String			Any text to describe the group
status	Request Response	enum GROUP_NEW (default) GROUP_ACTIVE GROUP_DISABLED			Group is active
mapCenter	Request Response	LatLng			Coordinates for group on the map.
accountID	Request Response	Integer	Required	Unique System ID	ID of account this group belongs to.
parentID	Request Response	Integer	Required	Unique System ID	ID of group's parent in the hierarchy
mapZoom	Request Response	Integer			Default zoom value for Google maps
managerID	Response	Integer			ID of person who is the designated manager
zoneRev	Response	String			

5.8 Events

XML



```
<eventPage start="20" pageCount="20" totalCount="404">
  <event>
    <driverID>11922</driverID>
    <driverName>Bizzaro Corey Catten</driverName>
    <driverTimeZone>US/Mountain</driverTimeZone>
    <eventCategory>WARNING</eventCategory>
    <eventType>IGNITION_ON</eventType>
    <eventTypeString>EventType.IGNITION_ON</eventTypeString>
    <flags>24</flags>
    <forgiven>0</forgiven>
    <groupID>43</groupID>
    <groupName>Executives</groupName>
    <heading>1</heading>
    <latitude>40.662575</latitude>
    <longitude>-111.824814</longitude>
    <noteID>9288674233162685</noteID>
    <speed>0</speed>
    <speedLimit>78</speedLimit>
    <time>2011-08-10T08:07:18-06:00</time>
    <type>IGNITION_ON</type>
    <vehicleID>186</vehicleID>
    <vehicleName>Coreys Truck</vehicleName>
  </event>
  ...

  <link type="application/xml"
    rel="next"
    href="https://my.inthinc.com/service/api/group/41/events/all/20110810/20110815/page;start=40;pageCount=20"/>
  <link type="application/xml"
    rel="previous"
    href="https://my.inthinc.com/service/api/group/41/events/all/20110810/20110815/page;start=0;pageCount=20"/>
</eventPage>
```



JSON

Properties

Property	In/Out	Type	Required	Description
driverID	Response	Integer		Unique ID of driver
driverName	Response	Integer		Driver's name
driverTimeZone	Response	TimeZone		Driver's time zone when the event occurred
eventCategory	Response	enum VIOLATION WARNING NONE EMERGENCY ZONE HOS TEXT DRIVER_LOGIN		See Events By Category
eventType	Response	Event Types		
eventTypeString	Response	String		
forgiven	Response	Boolean		Event is forgiven.
groupID	Response	Integer		Group driver belonged to at the time of the event.
groupName	Response	String		
heading	Response	Integer		Heading ID of the direction vehicle was traveling of the location



latitude	Response	Double		Location of the event
longitude	Response	Double		Location of the event
noteID	Response	Long		unique ID of the note from the device recording the event.
speed	Response	Integer		Speed at the time of the event in the units chosen for the driver.
speedLimit	Response	Integer		Speed limit at the location of the event.
time	Response	Date String		Time the event occurred.
type	Response	Integer		Unique ID assigned by the system on creation
vehicleID	Response	Integer		Unique ID of the vehicle in the event
personID	Response	Integer		Unique ID of the person record associated with the driver.

5.9 Red Flags

XML:

```
<redFlag>
  <details>Hard Acceleration at 60 mph</details>
  <event>
    <driverID>8442</driverID>
    <driverName>Last3713, DriverBAD m jr</driverName>
    <driverTimeZone>US/Mountain</driverTimeZone>
    <eventCategory>VIOLATION</eventCategory>
    <eventType>HARD_ACCEL</eventType>
    <eventTypeString>EventType.HARD_ACCEL</eventTypeString>
    <flags>7</flags>
    <forgiven>0</forgiven>
```



```
<groupId>3713</groupId>
<groupName>BAD</groupName>
<groupPath>/0/3709/3710/3713/</groupPath>
<heading>0</heading>
<latitude>33.011208</latitude>
<longitude>-117.146561</longitude>
<noteID>12103423998622784</noteID>
<speed>60</speed>
<speedLimit>55</speedLimit>
<subCategory>DRIVING_STYLE</subCategory>
<time>2013-11-06T07:09:30Z</time>
<type>NOTEEVENT</type>
<vehicleGroupId>3713</vehicleGroupId>
<vehicleGroupPath>/0/3709/3710/3713/</vehicleGroupPath>
<vehicleID>8520</vehicleID>
<vehicleName>BAD</vehicleName>
</event>
<level>CRITICAL</level>
<sent>SENT</sent>
</redFlag>
```

JSON:

```
{
  "event": {
    "driverID": 8442,
    "driverName": "Last3713, DriverBAD m jr",
    "driverTimeZone": "US/Mountain",
    "eventCategory": "VIOLATION",
    "eventType": "HARD_ACCEL",
    "flags": 7,
    "forgiven": 0,
    "groupId": 3713,
    "groupName": "BAD",
    "groupPath": "/0/3709/3710/3713/",
    "heading": 0,
```



```
"latitude": 33.018299,  
"longitude": -117.115051,  
"noteID": 12103423998622760,  
"speed": 60,  
"speedLimit": 55,  
"subCategory": "DRIVING_STYLE",  
"time": "2013-11-06T07:04:00Z",  
"type": "NOTEEVENT",  
"vehicleID": 8520,  
"vehicleName": "BAD",  
"vehicleGroupID": 3713,  
"vehicleGroupPath": "/0/3709/3710/3713",  
"eventTypeString": "EventType.HARD_ACCEL"  
},  
"sent": "SENT",  
"level": "CRITICAL",  
"details": "Hard Acceleration at 60 mph"  
},
```

Properties

Property	In/Out	Type	Required	Version *	Description
details	Response			v1	Textual description of the red flag (similiar to details shown in portal).
driverID	Response	Integer			Unique ID of driver
driverName	Response	Integer			Driver's name
driverTimeZone	Response	TimeZone			Driver's time zone when the event occurred
eventCategory	Response	enum VIOLATION WARNING NONE EMERGENCY ZONE HOS TEXT DRIVER_LOGIN			See Events By Category



eventType	Response	Event Types			
eventTypeString	Response	String			
flags	Response	Integer			
forgiven	Response	Boolean			Event is forgiven.
groupID	Response	Integer			GroupID of Group driver belonged to at the time of the event.
groupName	Response	String			Group name of Group driver belonged to at the time of the event
group Path	Response	String		v1	Group path of group driver belonged to at the time of the event
heading	Response	Integer			Heading ID of the direction vehicle was traveling
latitude	Response	Double			Location of the event
longitude	Response	Double			Location of the event
noteID	Response	Long			unique ID of the note from the device recording the event.
speed	Response	Integer			Speed at the time of the event in the units chosen for the driver.
speedLimit	Response	Integer			Speed limit at the location of the event.
subCategory	Response	SubCategory		v1	Event sub category (DRIVING_STYLE, SPEED, COMPLIANCE, FATIGUE, VEHICLE, WIRELINE, INSTALLATION, EMERGENCY, ZONES, HOS, TEXTMESSAGE, DRIVER, DVIR)
time	Response	Date String			Time the event occurred.
type	Response	Integer			Unique ID assigned by the system on creation
vehicleID	Response	Integer			Unique ID of the vehicle in the event
vehicleName	Response	String			The name of the vehicle.
vehicleGroupID	Response	Integer		v1	GroupID of Group vehicle belonged to at the time of the event.



vehicleGroupName	Response	String		v1	Group name of Group vehicle belonged to at the time of the event
vehicleGroupPath	Response	String		v1	Group path of group vehicle belonged to at the time of the event
level	Response	enum INFO, WARN, CRIT			Level of red flag alert. Information, Warning, or Critical

*** Note: Fields with version specified are only available when the endpoint specifies it supports that version.**

5.10 Trip

XML

```
<trip>
<driverID>13</driverID>
<endLoc>
  <head>1</head>
  <lat>40.71014</lat>
  <lng>-111.992523</lng>
  <speed>39</speed>
  <time>2012-01-10T18:18:20-07:00</time>
</endLoc>
<endTime>2011-07-20T17:11:24-06:00</endTime>
<mileage>4758</mileage>
<quality>WAYSMAART</quality>
<route>
  <head>1</head>
  <lat>40.71014</lat>
  <lng>-111.992523</lng>
  <speed>39</speed>
  <time>2012-01-10T17:58:08-07:00</time>
</route>
<route>
  <head>1</head>
```



```
<lat>40.71014</lat>
<lng>-111.992523</lng>
<speed>39</speed>
<time>2012-01-10T17:58:08-07:00</time>
</route>
.
.
.
<startLoc>
  <head>1</head>
  <lat>40.71014</lat>
  <lng>-111.992523</lng>
  <speed>39</speed>
  <time>2012-01-10T17:58:08-07:00</time>
</startLoc>
<startTime>2011-07-28T19:46:15-06:00</startTime>
<status>TRIP_COMPLETED</status>
<tripID>1311903975000</tripID>
<vehicleID>2</vehicleID>
</trip>
```

JSON

```
{
  "startTime":1311201033000,
  "status":"TRIP_COMPLETED"
  "driverID":13,
  "vehicleID":37703,
  "endTime":1311203484000,
  "events":null,
  "mileage":4758,
  "route":[{"
```

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```
    "head":1,
    "lat":40.71014,
    "lng":-111.992523
    "speed":39,
    "time":1311203484000,
  },
  {
    "head":1,
    "lat":40.71014,
    "lng":-111.992523
    "speed":39,
    "time":1311203484000,
  },
  {"lat":40.710144,
  "lng":-111.992523},
],
"endAddressStr":null,
"startAddressStr":null,
"startLoc":{
  "head":1,
  "lat":40.71014,
  "lng":-111.992523
  "speed":39,
  "time":1311203484000,
"endLoc":{
  "head":1,
  "lat":40.71014,
  "lng":-111.992523
  "speed":39,
  "time":1311203484000,
"tripID":1311201033000,
"quality":"WAYSMArt",
"modified":null,
"created":null
}
```



Properties

Property	In/Out	Type	Required	Description
startTime	Response	Date String		Date and time when the trip started.
status	Response	enum TRIP_IN_PROGRESS TRIP_COMPLETED		Trip status.
driverID	Response	Date String		System assigned ID of the driver.
vehicleID	Response	Date String		System assigned ID of the vehicle.
endTime	Response	Date String		Date when the trip ended.
events	Response	Collection of events.		Events that occurred on the trip.
mileage	Response	Integer		Length of the trip.
route	Response	Collection of LatLng		LatLngs plotting the route of the trip.
endAddressStr	Response	String		Address of the end of the trip.
startAddressStr	Response	String		Address of the start of the trip.
startLoc	Response	LatLng		Location of the start of the trip.
endLoc	Response	Date String		Location of the end of the trip.
tripID	Response	Date String		System assigned ID of the trip.



quality	Response	enum GOOD BAD UNKNOWN WAYSMART		Quality of GPS. waySmart doesn't support this feature yet.
modified	Response	Date String		Date when the trip record was last modified.
created	Response	Date String		Date when the trip record was created.
head	Response	Integer		Heading ID of the direction vehicle was traveling of the location
speed	Response	Integer		Speed of the vehicle at the location
time	Response	Date String		Date of the location

5.11 Last Locations

XML

```
<lastLocation>
  <driverEmployeeId>E371395265</driverEmployeeId>
  <driverID>8442</driverID>
  <head>0</head>
  <location>
    <lat>32.9603</lat>
    <lng>-117.210678</lng>
  </location>
  <speed>60</speed>
  <time>2013-11-06T07:24:30Z</time>
  <vehicleID>8520</vehicleID>
  <vehicleName>VehicleBAD</vehicleName>
</lastLocation>
```



JSON

```
{
  "driverID": 8442,
  "driverEmployeeId": "E371395265",
  "vehicleID": 8520,
  "vehicleName": "VehicleBAD",
  "head": 0,
  "speed": 60,
  "time": "2013-11-07T07:24:30Z",
  "location": {
    "lat": 32.9603,
    "lng": -117.210678
  }
}
```

Properties

Property	In/Out	Type	Required	Version *	Description
time	Response	Date String			Time at location
driverID	Response	Integer			Driver's unique system assigned ID
driverEmployeeID	Response	String		v1	Customer assigned unique driver id
vehicleID	Response	Integer			Vehicle's unique system assigned ID
vehicleName				v1	Customer assigned unique vehicle name
loc	Response	LatLng			Coordinates of the location



speed	Response	Integer			Speed of the vehicle of the location
head	Response	Integer			Heading ID of the direction vehicle was traveling of the location

* **Note:** Properties marked with version are only available on endpoints that support the version.

5.12 Score

XML

```
<score>
  <aggressiveAccel xsi:type="xs:int">50</aggressiveAccel>
  <aggressiveAccelEvents xsi:type="xs:int">0</aggressiveAccelEvents>
  <aggressiveBrake xsi:type="xs:int">50</aggressiveBrake>
  <aggressiveBrakeEvents xsi:type="xs:int">0</aggressiveBrakeEvents>
  <aggressiveBump xsi:type="xs:int">1</aggressiveBump>
  <aggressiveBumpEvents xsi:type="xs:int">0</aggressiveBumpEvents>
  <aggressiveLeftEvents xsi:type="xs:int">0</aggressiveLeftEvents>
  <aggressiveRightEvents xsi:type="xs:int">0</aggressiveRightEvents>
  <aggressiveTurn xsi:type="xs:int">30</aggressiveTurn>
  <avgSpeed xsi:type="xs:int">0</avgSpeed>
  <coaching xsi:type="xs:int">0</coaching>
  <crashDays xsi:type="xs:int">55</crashDays>
  <crashEvents xsi:type="xs:int">0</crashEvents>
  <crashOdometer xsi:type="xs:long">0</crashOdometer>
  <crashTotal xsi:type="xs:int">4</crashTotal>
  <driveTime xsi:type="xs:long">0</driveTime>
  <drivingStyle xsi:type="xs:int">12</drivingStyle>
  <emuRpmDriveTime xsi:type="xs:long">0</emuRpmDriveTime>
  <endingDate>2011-08-15T18:00:00-06:00</endingDate>
  <endingOdometer xsi:type="xs:long">10093</endingOdometer>
  <idleHi xsi:type="xs:long">0</idleHi>
  <idleHiEvents xsi:type="xs:int">0</idleHiEvents>
  <idleLo xsi:type="xs:long">0</idleLo>
```

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```
<idleLoEvents xsi:type="xs:int">0</idleLoEvents>
<idlePercent xsi:type="xs:double">0.0</idlePercent>
<idleTotal xsi:type="xs:long">0</idleTotal>
<milesDriven xsi:type="xs:long">0</milesDriven>
<odometer xsi:type="xs:long">0</odometer>
<odometer1 xsi:type="xs:long">0</odometer1>
<odometer2 xsi:type="xs:long">0</odometer2>
<odometer3 xsi:type="xs:long">0</odometer3>
<odometer4 xsi:type="xs:long">0</odometer4>
<odometer5 xsi:type="xs:long">0</odometer5>
<odometerHeavy xsi:type="xs:long">0</odometerHeavy>
<odometerLight xsi:type="xs:long">0</odometerLight>
<odometerMedium xsi:type="xs:long">0</odometerMedium>
<overall xsi:type="xs:int">25</overall>
<rpmEvents xsi:type="xs:int">0</rpmEvents>
<safetyTotal xsi:type="xs:long">0</safetyTotal>
<seatbelt xsi:type="xs:int">50</seatbelt>
<seatbeltCoaching xsi:type="xs:int">0</seatbeltCoaching>
<seatbeltEvents xsi:type="xs:int">0</seatbeltEvents>
<speedCoaching1 xsi:type="xs:int">0</speedCoaching1>
<speedCoaching2 xsi:type="xs:int">0</speedCoaching2>
<speedCoaching3 xsi:type="xs:int">0</speedCoaching3>
<speedCoaching4 xsi:type="xs:int">0</speedCoaching4>
<speedCoaching5 xsi:type="xs:int">0</speedCoaching5>
<speedEvents1 xsi:type="xs:int">0</speedEvents1>
<speedEvents15PlusMphOver xsi:type="xs:int">0</speedEvents15PlusMphOver>
<speedEvents1To7MphOver xsi:type="xs:int">0</speedEvents1To7MphOver>
<speedEvents2 xsi:type="xs:int">0</speedEvents2>
<speedEvents3 xsi:type="xs:int">0</speedEvents3>
<speedEvents4 xsi:type="xs:int">0</speedEvents4>
<speedEvents5 xsi:type="xs:int">0</speedEvents5>
<speedEvents8To14MphOver xsi:type="xs:int">0</speedEvents8To14MphOver>
<speedEventsOver80Mph xsi:type="xs:int">0</speedEventsOver80Mph>
<speedOdometer1 xsi:type="xs:long">0</speedOdometer1>
<speedOdometer2 xsi:type="xs:long">0</speedOdometer2>
<speedOdometer3 xsi:type="xs:long">0</speedOdometer3>
```



```
<speedOdometer4 xsi:type="xs:long">0</speedOdometer4>
<speedOdometer5 xsi:type="xs:long">0</speedOdometer5>
<speeding xsi:type="xs:int">40</speeding>
<speeding1 xsi:type="xs:int">50</speeding1>
<speeding2 xsi:type="xs:int">50</speeding2>
<speeding3 xsi:type="xs:int">35</speeding3>
<speeding4 xsi:type="xs:int">50</speeding4>
<speeding5 xsi:type="xs:int">50</speeding5>
<startingDate>2011-07-17T18:00:00-06:00</startingDate>
<startingOdometer xsi:type="xs:long">10093</startingOdometer>
<trips xsi:type="xs:int">0</trips>
<weightedMpg xsi:type="xs:double">0.0</weightedMpg>
</score>
```

JSON

```
{
  "trips":0,
  "endingOdometer":10093,
  "overall":25,
  "endingDate":1313452800000,
  "odometer1":0,
  "odometer2":0,
  "odometer3":0,
  "odometer4":0,
  "odometer5":0,
  "odometer":0,
  "speeding":40,
  "drivingStyle":12,
  "seatbelt":50,
  "crashEvents":0,
  "crashTotal":4,
  "crashDays":55,
```

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```
"crashOdometer":0,  
"speedOdometer":null,  
"emuRpmDriveTime":0,  
"idleHi":0,  
"idleLo":0,  
"nVehicles":null,  
"emuRpmVehicles":null,  
"mpgHeavy":null,  
"mpgLight":null,  
"mpgMedium":null,  
"aggressiveAccelEvents":0,  
"aggressiveBrakeEvents":0,  
"aggressiveLeftEvents":0,  
"aggressiveRightEvents":0,  
"aggressiveBumpEvents":0,  
"seatbeltEvents":0,  
"startingOdometer":10093,  
"speedEvents1To7MphOver":0,  
"speedEvents8To14MphOver":0,  
"speedEvents15PlusMphOver":0,  
"milesDriven":0,  
"aggressiveAccel":50,  
"aggressiveBrake":50,  
"aggressiveBump":1,  
"aggressiveTurn":30,  
"speedEvents":null,  
"speedEvents1":0,  
"speedEvents2":0,  
"speedEvents3":0,  
"speedEvents4":0,  
"speedEvents5":0,  
"speedOdometer1":0,  
"speedOdometer2":0,  
"speedOdometer3":0,  
"speedOdometer4":0,  
"speedOdometer5":0,
```



```
"startingDate":1310947200000,
"aggressiveEvents":null,
"avgSpeed":0,
"coaching":0,
"driveTime":0,
"idleHiEvents":0,
"idleLoEvents":0,
"rpmEvents":0,
"seatbeltCoaching":0,
"speedCoaching":null,
"speedCoaching1":0,
"speedCoaching2":0,
"speedCoaching3":0,
"speedCoaching4":0,
"speedCoaching5":0,
"speeding1":50,
"speeding2":50,
"speeding3":35,
"speeding4":50,
"speeding5":50,
"speedOver":null,
"speedOver1":null,
"speedOver2":null,
"speedOver3":null,
"speedOver4":null,
"speedOver5":null,
"odometerLight":0,
"odometerMedium":0,
"odometerHeavy":0,
"safetyTotal":0,
"weightedMpg":0.0,
"idleTotal":0,
"idlePercent":0.0,
"speedEventsOver80Mph":0
}
```



Properties

Property	In/Out	Type	Required	Description
trips	Response	Number		Number of trips
endingOdometer	Response	Number		odometer at the end of the time period
overall	Response	Number		Overall score x 10
endingDate	Response	Date String		End date and time
odometer1-5	Response	Number		Vehicle's unique system assigned ID
speeding	Response	Number		Speeding score x 10
drivingStyle	Response	Number		Driving style score x 10
seatbelt	Response	Number		Seatbelt score x 10
crashEvents	Response	Number		Number of crashes in the time period
crashTotal	Response	Number		Number of crashes since start of recording
crashDays	Response	Number		Number of days since the last crash
crashOdometer	Response	Number		
speedOdometer	Response	Number		
emuRpmDriveTime	Response	Number		



idleHi	Response	Number		Total time idling in seconds
idleLo	Response	Number		
nVehicles	Response	Number		
emuRpmVehicles	Response	Number		
mpgHeavy	Response	Number		Fuel efficiency for heavy vehicles
mpgLight	Response	Number		Fuel efficiency for light vehicles
mpgMedium	Response	Number		Fuel efficiency for medium vehicles
aggressiveAccelEvents	Response	Number		Number of aggressive acceleration events
aggressiveBrakeEvents	Response	Number		Number of aggressive braking events
aggressiveLeftEvents	Response	Number		Number of aggressive left turn events
aggressiveRightEvents	Response	Number		Number of aggressive right turn events
aggressiveBumpEvents	Response	Number		Number of aggressive vertical bump events
seatbeltEvents	Response	Number		Number of seatbelt events
startingOdometer	Response	Number		Odometer at the start of the time period.
speedEvents1To7MphOver	Response	Number		Number of speeding events where the speeding was between 1 and 7 mph (or kph equivalent) over the speed limit.
speedEvents8To14MphOver	Response	Number		Number of speeding events where the speeding was between 8 and 14 mph (or kph equivalent) over the speed limit.



speedEvents15PlusMphOver	Response	Number		Number of speeding events where the speeding was 15 or more mph (or kph equivalent) over the speed limit.
milesDriven	Response	Number		Total miles driven in the time period
aggressiveAccel	Response	Number		Aggressive acceleration score x 10
aggressiveBrake	Response	Number		Aggressive braking score x 10
aggressiveBump	Response	Number		Aggressive vertical bump score x 10
aggressiveTurn	Response	Number		Aggressive turns score x 10
speedEvents	Response	Number		Total speeding events in the time period
speedEvents1	Response	Number		Number of speeding events where the speed limit is between 1 and 30 mph (1 and 48 kph)
speedEvents2	Response	Number		Number of speeding events where the speed limit is between 31 and 40 mph (49 and 64 kph)
speedEvents3	Response	Number		Number of speeding events where the speed limit is between 41 and 54 mph (65 and 86 kph)
speedEvents4	Response	Number		Number of speeding events where the speed limit is between 55 and 64 mph (87 and 102 kph)
speedEvents5	Response	Number		Number of speeding events where the speed limit is between 65 and 80 mph (103 and 128 kph)
speedOdometer1-5	Response	Number		Vehicle's unique system assigned ID
startingDate	Response	Date String		Date and time of start of time period.



aggressiveEvents	Response	Number		Total number of aggressive events.
avgSpeed	Response	Number		Vehicle's unique system assigned ID
coaching	Response	Number		Number of coaching events
driveTime	Response	Number		Total drive time in the time period.
idleHiEvents	Response	Number		Number of high idling events.
idleLoEvents	Response	Number		Number of low idling events.
rpmEvents	Response	Number		
seatbeltCoaching	Response	Number		Number of seatbelt coaching events.
speedCoaching	Response	Number		Total number of speeding coaching events.
speedCoaching1	Response	Number		Number of speeding coaching events in speeding category 1 (1 to 30 mph or 1 to 48 kph).
speedCoaching2	Response	Number		Number of speeding coaching events in speeding category 2 (31 to 40 mph or 49 to 64 kph).
speedCoaching3	Response	Number		Number of speeding coaching events in speeding category 3 (41 to 54 mph or 65 to 86 kph).
speedCoaching4	Response	Number		Number of speeding coaching events in speeding category 4 (55 to 64 mph or 87 to 102 kph).
speedCoaching5	Response	Number		Number of speeding coaching events in speeding category 5 (65 to 80 mph or 103 to 128 kph).
speeding	Response	Number		Overall speeding score x 10



speeding1	Response	Number		Score x 10 for speeding in speed category 1 (1 to 30 mph or 1 to 48 kph).
speeding2	Response	Number		Score x 10 for speeding in speed category 2 (31 to 40 mph or 49 to 64 kph).
speeding3	Response	Number		Score x 10 for speeding in speed category 3 (41 to 54 mph or 65 to 86 kph).
speeding4	Response	Number		Score x 10 for speeding in speed category 4 (55 to 64 mph or 87 to 102 kph).
speeding5	Response	Number		Score x 10 for speeding in speed category 5 (65 to 80 mph or 103 to 128 kph).
speedOver, 1-5	Response	Number		
odometerLight, odometerMedium, odometerHeavy	Response	Number		
safetyTotal	Response	Number		Total number of safety events, includes aggressive acceleration, braking, turns and bumps.
weightedMpg	Response	Number		
idleTotal	Response	Number		Total amount of time idling.
idlePercent	Response	Number		Percentage of total drive time spent idling
speedEventsOver80Mph	Response	Number		Number of speeding events where the speed was over 80mph (128kph)

5.13 Trend

XML

<trend>

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```
<aggressiveAccel xsi:type="xs:int">50</aggressiveAccel>
<aggressiveAccelEvents xsi:type="xs:int">0</aggressiveAccelEvents>
<aggressiveBrake xsi:type="xs:int">50</aggressiveBrake>
<aggressiveBrakeEvents xsi:type="xs:int">0</aggressiveBrakeEvents>
<aggressiveBump xsi:type="xs:int">1</aggressiveBump>
<aggressiveBumpEvents xsi:type="xs:int">0</aggressiveBumpEvents>
<aggressiveLeftEvents xsi:type="xs:int">0</aggressiveLeftEvents>
<aggressiveRightEvents xsi:type="xs:int">0</aggressiveRightEvents>
<aggressiveTurn xsi:type="xs:int">50</aggressiveTurn>
<avgSpeed xsi:type="xs:int">0</avgSpeed>
<coaching xsi:type="xs:int">0</coaching>
<crashDays xsi:type="xs:int">26</crashDays>
<crashEvents xsi:type="xs:int">0</crashEvents>
<crashOdometer xsi:type="xs:long">0</crashOdometer>
<crashTotal xsi:type="xs:int">4</crashTotal>
<driveTime xsi:type="xs:long">0</driveTime>
<drivingStyle xsi:type="xs:int">13</drivingStyle>
<emuRpmDriveTime xsi:type="xs:long">0</emuRpmDriveTime>
<endingDate>2011-07-17T18:00:00-06:00</endingDate>
<endingOdometer xsi:type="xs:long">10093</endingOdometer>
<idleHi xsi:type="xs:long">0</idleHi>
<idleHiEvents xsi:type="xs:int">0</idleHiEvents>
<idleLo xsi:type="xs:long">0</idleLo>
<idleLoEvents xsi:type="xs:int">0</idleLoEvents>
<odometer xsi:type="xs:long">0</odometer>
<odometer1 xsi:type="xs:long">0</odometer1>
<odometer2 xsi:type="xs:long">0</odometer2>
<odometer3 xsi:type="xs:long">0</odometer3>
<odometer4 xsi:type="xs:long">0</odometer4>
<odometer5 xsi:type="xs:long">0</odometer5>
<overall xsi:type="xs:int">26</overall>
<rpmEvents xsi:type="xs:int">0</rpmEvents>
<seatbelt xsi:type="xs:int">50</seatbelt>
<seatbeltCoaching xsi:type="xs:int">0</seatbeltCoaching>
<seatbeltEvents xsi:type="xs:int">0</seatbeltEvents>
<speedCoaching1 xsi:type="xs:int">0</speedCoaching1>
```



```
<speedCoaching2 xsi:type="xs:int">0</speedCoaching2>
<speedCoaching3 xsi:type="xs:int">0</speedCoaching3>
<speedCoaching4 xsi:type="xs:int">0</speedCoaching4>
<speedCoaching5 xsi:type="xs:int">0</speedCoaching5>
<speedEvents1 xsi:type="xs:int">0</speedEvents1>
<speedEvents2 xsi:type="xs:int">0</speedEvents2>
<speedEvents3 xsi:type="xs:int">0</speedEvents3>
<speedEvents4 xsi:type="xs:int">0</speedEvents4>
<speedEvents5 xsi:type="xs:int">0</speedEvents5>
<speedOdometer1 xsi:type="xs:long">0</speedOdometer1>
<speedOdometer2 xsi:type="xs:long">0</speedOdometer2>
<speedOdometer3 xsi:type="xs:long">0</speedOdometer3>
<speedOdometer4 xsi:type="xs:long">0</speedOdometer4>
<speedOdometer5 xsi:type="xs:long">0</speedOdometer5>
<speeding xsi:type="xs:int">40</speeding>
<speeding1 xsi:type="xs:int">50</speeding1>
<speeding2 xsi:type="xs:int">50</speeding2>
<speeding3 xsi:type="xs:int">35</speeding3>
<speeding4 xsi:type="xs:int">50</speeding4>
<speeding5 xsi:type="xs:int">50</speeding5>
<startingDate>2011-07-11T18:00:00-06:00</startingDate>
<startingOdometer xsi:type="xs:long">10093</startingOdometer>
<trips xsi:type="xs:int">0</trips>
</trend>
```

JSON

```
{
  "trips":0,
  "endingOdometer":10093,
  "overall":26,
  "endingDate":1310947200000,
  "odometer1":0,
```



```
"odometer2":0,  
"odometer3":0,  
"odometer4":0,  
"odometer5":0,  
"odometer":0,  
"speeding":40,  
"drivingStyle":13,  
"seatbelt":50,  
"crashEvents":0,  
"crashTotal":4,  
"crashDays":26,  
"crashOdometer":0,  
"speedOdometer":null,  
"emuRpmDriveTime":0,  
"idleHi":0,  
"idleLo":0,  
"nVehicles":null,  
"emuRpmVehicles":null,  
"mpgHeavy":null,  
"mpgLight":null,  
"mpgMedium":null,  
"aggressiveAccelEvents":0,  
"aggressiveBrakeEvents":0,  
"aggressiveLeftEvents":0,  
"aggressiveRightEvents":0,  
"aggressiveBumpEvents":0,  
"seatbeltEvents":0,  
"startingOdometer":10093,  
"aggressiveAccel":50,  
"aggressiveBrake":50,  
"aggressiveBump":1,  
"aggressiveTurn":50,  
"speedEvents":null,  
"speedEvents1":0,  
"speedEvents2":0,  
"speedEvents3":0,
```



```
"speedEvents4":0,  
"speedEvents5":0,  
"speedOdometer1":0,  
"speedOdometer2":0,  
"speedOdometer3":0,  
"speedOdometer4":0,  
"speedOdometer5":0,  
"startingDate":1310428800000,  
"aggressiveEvents":null,  
"avgSpeed":0,  
"coaching":0,  
"driveTime":0,  
"idleHiEvents":0,  
"idleLoEvents":0,  
"rpmEvents":0,  
"seatbeltCoaching":0,  
"speedCoaching":null,  
"speedCoaching1":0,  
"speedCoaching2":0,  
"speedCoaching3":0,  
"speedCoaching4":0,  
"speedCoaching5":0,  
"speeding1":50,  
"speeding2":50,  
"speeding3":35,  
"speeding4":50,  
"speeding5":50,  
"speedOver":null,  
"speedOver1":null,  
"speedOver2":null,  
"speedOver3":null,  
"speedOver4":null,  
"speedOver5":null  
}
```



Properties

Property	In/Out	Type	Required	Description
trips	Response	Number		Number of trips
endingOdometer	Response	Number		odometer at the end of the time period
overall	Response	Number		Overall score x 10
endingDate	Response	Date String		End date and time
odometer1-5	Response	Number		Vehicle's unique system assigned ID
speeding	Response	Number		Speeding score x 10
drivingStyle	Response	Number		Driving style score x 10
seatbelt	Response	Number		Seatbelt score x 10
crashEvents	Response	Number		Number of crashes in the time period
crashTotal	Response	Number		Number of crashes since start of recording
crashDays	Response	Number		Number of days since the last crash
crashOdometer	Response	Number		
speedOdometer	Response	Number		
emuRpmDriveTime	Response	Number		



idleHi	Response	Number		Total time idling in seconds
idleLo	Response	Number		
nVehicles	Response	Number		
emuRpmVehicles	Response	Number		
mpgHeavy	Response	Number		Fuel efficiency for heavy vehicles
mpgLight	Response	Number		Fuel efficiency for light vehicles
mpgMedium	Response	Number		Fuel efficiency for medium vehicles
aggressiveAccelEvents	Response	Number		Number of aggressive acceleration events
aggressiveBrakeEvents	Response	Number		Number of aggressive braking events
aggressiveLeftEvents	Response	Number		Number of aggressive left turn events
aggressiveRightEvents	Response	Number		Number of aggressive right turn events
aggressiveBumpEvents	Response	Number		Number of aggressive vertical bump events
seatbeltEvents	Response	Number		Number of seatbelt events
startingOdometer	Response	Number		Odometer at the start of the time period.
milesDriven	Response	Number		Total miles driven in the time period
aggressiveAccel	Response	Number		Aggressive acceleration score x 10
aggressiveBrake	Response	Number		Aggressive braking score x 10



aggressiveBump	Response	Number		Aggressive vertical bump score x 10
aggressiveTurn	Response	Number		Aggressive turns score x 10
speedEvents	Response	Number		Total speeding events in the time period
speedEvents1	Response	Number		Number of speeding events where the speed limit is between 1 and 30 mph (1 and 48 kph)
speedEvents2	Response	Number		Number of speeding events where the speed limit is between 31 and 40 mph (49 and 64 kph)
speedEvents3	Response	Number		Number of speeding events where the speed limit is between 41 and 54 mph (65 and 86 kph)
speedEvents4	Response	Number		Number of speeding events where the speed limit is between 55 and 64 mph (87 and 102 kph)
speedEvents5	Response	Number		Number of speeding events where the speed limit is between 65 and 80 mph (103 and 128 kph)
speedOdometer1-5	Response	Number		Vehicle's unique system assigned ID
startingDate	Response	Date String		Date and time of start of time period.
aggressiveEvents	Response	Number		Total number of aggressive events.
avgSpeed	Response	Number		Vehicle's unique system assigned ID
coaching	Response	Number		Number of coaching events
driveTime	Response	Number		Total drive time in the time period.
idleHiEvents	Response	Number		Number of high idling events.



idleLoEvents	Response	Number		Number of low idling events.
rpmEvents	Response	Number		
seatbeltCoaching	Response	Number		Number of seatbelt coaching events.
speedCoaching	Response	Number		Total number of speeding coaching events.
speedCoaching1	Response	Number		Number of speeding coaching events in speeding category 1 (1 to 30 mph or 1 to 48 kph).
speedCoaching2	Response	Number		Number of speeding coaching events in speeding category 2 (31 to 40 mph or 49 to 64 kph).
speedCoaching3	Response	Number		Number of speeding coaching events in speeding category 3 (41 to 54 mph or 65 to 86 kph).
speedCoaching4	Response	Number		Number of speeding coaching events in speeding category 4 (55 to 64 mph or 87 to 102 kph).
speedCoaching5	Response	Number		Number of speeding coaching events in speeding category 5 (65 to 80 mph or 103 to 128 kph).
speeding	Response	Number		Overall speeding score x 10
speeding1	Response	Number		Score x 10 for speeding in speed category 1 (1 to 30 mph or 1 to 48 kph).
speeding2	Response	Number		Score x 10 for speeding in speed category 2 (31 to 40 mph or 49 to 64 kph).
speeding3	Response	Number		Score x 10 for speeding in speed category 3 (41 to 54 mph or 65 to 86 kph).
speeding4	Response	Number		Score x 10 for speeding in speed category 4 (55 to 64 mph or 87 to 102 kph).



speeding5	Response	Number		Score x 10 for speeding in speed category 5 (65 to 80 mph or 103 to 128 kph).
speedOver, 1-5	Response	Number		
safetyTotal	Response	Number		Total number of safety events, includes aggressive acceleration, braking, turns and bumps.
weightedMpg	Response	Number		
idleTotal	Response	Number		Total amount of time idling.
idlePercent	Response	Number		Percentage of total drive time spent idling

5.14 Hours of Service Violations

XML

```
<collection>
  <violationsDetail>
    <driverID>20837</driverID>
    <driverName>HOS, Casey</driverName>
    <employeeId>CJHOS</employeeId>
    <groupId>46</groupId>
    <groupName>Top->Top->Top->Firmware Team</groupName>
    <time>2011-12-11T10:29:35-07:00</time>
    <vehicleID>7299</vehicleID>
    <vehicleName>CJWAYSMTART</vehicleName>
    <violationsList>
      <cfr>395.3 (a)(2)</cfr>
      <type>14 Hour On Duty Rule Needs 10 Hour Reset</type>
```

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```
<dot>US Oil 8 DAY</dot>
<minutes>50</minutes>
</violationsList>
...
</violationsDetail>
...
```

JSON

Properties

Property	In/Out	Type	Required	Description
violationsDetail	Response			Hours of service violation details
violationsList	Response			List of each violation associated with the violation detail
driverID	Response	Number		Unique driverID, allocated by the system on creation. Used to reference drivers in requests and other records
driverName	Response	String		Name of the driver
employeeId	Response	String		Customer specific unique driver identifier
groupId	Response	Number		ID for Fleet, Division, or Team driver belongs to
groupName	Response	String		Name for the group
time	Response	Date String		Time driver went into violation
vehicleID	Response	Number		Unique vehicleID, allocated by the system on creation. Used to reference vehicles in requests and other records
vehicleName	Response	String		The name of the vehicle. There is no restriction on the format of this, but will be used for searching, sorting, and filtering purposes.
cfr	Response	String		FMCSA CFR the violation is associated with



type	Response	String		The type of HOS violation
dot	Response	String		The ruleset the violation is being calculated against
minutes	Response	Number		The number of minutes in violation

5.15 LatLng

XML

```
<lat>41.1678</lat>
<lng>-112.015</lng>
```

JSON

```
{
  "lat":41.1678,
  "lng":-112.015
}
```

Properties

Property	In/Out	Type	Required	Description
lat	Response	Double 0 - 90	Required	Latitude



lng	Response	Double -180 - 180	Required	Longitude
-----	----------	-------------------	----------	-----------

5.16 Account Attributes

XML

```
<props>
  <noReplyEmail/>
  <passwordChange>0</passwordChange>
  <passwordStrength>0</passwordStrength>
  <phoneAlertsActive>1</phoneAlertsActive>
  <supportContact1/>
  <supportContact2/>
  <supportContact3/>
  <supportContact4/>
  <supportContact5/>
  <waySmart>true</waySmart>
  <wmsLayerQueryParam/>
  <wmsLayers/>
  <wmsQuery/>
  <wmsURL/>
</props>
```

JSON



Properties

Property	In/Out	Type	Required	Description
wmsURL	Response	String		Web Map Service - custom URL.
wmsQuery	Response	String		Web Map Service - custom query params.
wmsLayers	Response	String		Web Map Service - custom layers.
wmsLayerQueryParam	Response	String		Web Map Service - custom layer query params.
phoneAlertsActive	Response	String		Phone alerts are active.
noReplyEmail	Response	String		No reply email for alerts.
supportContact1-5	Response	String		Contacts for Technical Support.
waySmart	Response	String		Account supports waySmart.
passwordExpire	Response	String		Number of days passwords are valid for
passwordStrength	Response	String		Minimum password strength.
loginExpire	Response	String		Number of days
passwordChange	Response	String none warn require		Initial password change level
multipleCompanies	Response	Boolean		Fleet represents multiple companies.
fleetGroupID	Response	Integer		System assigned ID of the group at the level above the level representing the individual companies.



5.17 Address

XML

```
<addr1>Suite 1A</addr1>
<addr2>123 Made Up Street</addr2>
<city>Somewhere City</city>
<state>District of Imagination</state>
<zip>12345</zip>
```

JSON

```
{
  "addr1": "Suite 1A",
  "addr2": "123 Made Up Street",
  "city": "Somewhere City",
  "state": "District of Imagination",
  "zip": "12345"
}
```

Properties

Property	In/Out	Type	Required	Description
addr1	Request Response	String		First line of address



addr2	Request Response	String		Street address
city	Request Response	String		
state	Request Response	State		State or province
zip	Request Response	String		zip code or post code

5.18 States

stateID	abbrev	name
1	AL	Alabama
2	AK	Alaska
3	AZ	Arizona
4	AR	Arkansas
5	CA	California
6	CO	Colorado
7	CT	Connecticut
8	DE	Delaware
9	DC	District of Columbia
10	FL	Florida
11	GA	Georgia
12	HI	Hawaii
13	ID	Idaho
14	IL	Illinois
15	IN	Indiana
16	IA	Iowa
17	KS	Kansas
18	KY	Kentucky
19	LA	Louisiana
20	ME	Maine
21	MD	Maryland
22	MA	Massachusetts



23	MI	Michigan
24	MN	Minnesota
25	MS	Mississippi
26	MO	Missouri
27	MT	Montana
28	NE	Nebraska
29	NV	Nevada
30	NH	New Hampshire
31	NJ	New Jersey
32	NM	New Mexico
33	NY	New York
34	NC	North Carolina
35	ND	North Dakota
36	OH	Ohio
37	OK	Oklahoma
38	OR	Oregon
39	PA	Pennsylvania
40	RI	Rhode Island
41	SC	South Carolina
42	SD	South Dakota
43	TN	Tennessee
44	TX	Texas
45	UT	Utah
46	VT	Vermont
47	VA	Virginia
48	WA	Washington
49	WV	West Virginia
50	WI	Wisconsin
51	WY	Wyoming
52	AS	American Samoa
53	FM	Federated States of Micronesia
54	GU	Guam
55	MH	Marshall Islands
56	MP	Northern Mariana Islands
57	PW	Palau
58	PR	Puerto Rico



59	VI	Virgin Islands
60	UM	U.S. Minor Outlying Islands
61	AE	Armed Forces Africa
62	AA	Armed Forces Americas
63	AE	Armed Forces Canada
64	AE	Armed Forces Europe
65	AE	Armed Forces Middle East
66	AP	Armed Forces Pacific
67	AB	Alberta
68	BC	British Columbia
69	MB	Manitoba
70	NB	New Brunswick
71	NL	Newfoundland and Labrador
72	NT	Northwest Territories
73	NS	Nova Scotia
74	NU	Nunavut
75	ON	Ontario
76	PE	Prince Edward Island
77	QC	Quebec
78	SK	Saskatchewan
79	YT	Yukon

5.19 DOT HOS Rule Sets

NON_DOT (default)
US
US_OIL
CANADA
CANADA_60_DEGREES
US_HOME_OFFICE
CANADA_HOME_OFFICE
TEXAS
CANADA_ALBERTA
CANADA_2007_CYCLE_1
CANADA_2007_CYCLE_2



CANADA_2007_60_DEGREES_CYCLE_1
CANADA_2007_60_DEGREES_CYCLE_2
CANADA_2007_OIL
CANADA_2007_60_DEGREES_OIL
SLB_INTERNAL
US_7DAY
US_OIL_7DAY
US_WATERWELL_7DAY
US_WATERWELL_8DAY
US_OIL_NO_WAIT_7DAY
US_OIL_NO_WAIT_8DAY

5.20 Time Zones

We use the Olsen Time Zone Database (tz database) as used by Java.

Time zone representation is described at the W3C Working Group site [Working with Time Zones](#)

Examples of valid time zone representations in the timeZone properties are:

<timeZone>US/Mountain</timeZone>

<timeZone>Africa/Johannesburg</timeZone>

The short codes, such as MDT and SAST are not valid in requests (they are deprecated in Java because they are not unique) though they may appear in response entities.

5.21 Locales

Locales are represented by the language code and optional variant code.

We currently support:

<locale>en_US</locale> (American English)

<locale>ro</locale> (Romanian)

<locale>es</locale> (Spanish)

<locale>fr</locale> (French)



5.22 Event Types

Event Type	Description
TAMPERING	If the device detects it was unplugged an tampering notification will be sent
SEATBELT	If the device can read seatbelt from the vehicle bus, or the device is equipped with a seatbelt sensor, and the driver drives with the seatbelt unbuckled a seatbelt event will be sent.
SPEEDING	If the device exceeds the speed limit + the device speed buffer for greater than the device grace period, a speeding event will occur
HARD_ACCEL	If the device exceeds the hard acceleration thresholds a hard accel will be generated
HARD_BRAKE	If the device exceeds the hard brake thresholds a hard brake will be generated
HARD_TURN	If the device exceeds the hard turn thresholds a hard turn will be generated
HARD_VERT	If the device exceeds the hard bump thresholds a hard bump will be generated
ZONES_ARRIVAL	Generated when a device enters a geofenced zone with arrivals turned on
ZONES_DEPARTURE	Generated when a device exits a geofenced zone with departures turned off
LOW_BATTERY	Generated when a device detects the vehicle battery drops below 11.9V
DEVICE_LOW_BATTERY	Generated when the device detects its own backup battery is low
IDLING	Generated when the device exceeds the idle time threshold
CRASH	Generated when the device detects a Crash
UNKNOWN	
NO_DRIVER	Generated when no driver is logged in and the vehicle starts moving



PARKING_BRAKE	Generated when the vehicle ignition turns off and the parking brake is not set. Requires an external sensor to be installed
IGNITION_ON	Generated when the ignition is turned on
MICRO_SLEEP	
POTENTIAL_TAMPERING	Generated when the device detects it has been unplugged
WIRELINE_ALARM	Generated when the device is configured to use the AIB system and the vehicle moves without the door alarm armed.
INSTALL	Generated when the device has an install event done
FIRMWARE_CURRENT	Generated when the firmware is updated on the device
LOCATION_DEBUG	Manually generated location event from the keypad on a waySmart. Used to troubleshoot Satellite, Cellular, and Wifi connectivity
QSI_UPDATED	Generated when the Handheld or Touchscreen firmware is updated
WITNESS_UPDATED	Generated when the Witness firmware is updated. The Witness is the internal crash detection module
ZONES_CURRENT	Generated when the geofenced zones are updated on the device
NO_INTERNAL_THUMB_DRIVE	Generated when the device can't mount the internal flash drive
WITNESS_HEARTBEAT_VIOLATION	Generated when the device can't communicate with the internal Witness module
PANIC	Generated by the driver pressing the Panic button on the Handheld or Touchscreen
MAN_DOWN	Generated by the man down feature. When the man down timer expires a man down event is sent
MAN_DOWN_CANCELED	Generated when someone cancels the man down alarm after the alarm has gone off.
DOT_STOPPED	Generated by the driver as a DOT STOPPED event



HOS_NO_HOURS	Generated when the current driver logged in runs out of hours according to their HOS ruleset
TEXT_MESSAGE	Generated when a text message is sent from the device
OFF_HOURS	Generated when the current driver drives during OFF HOURS
IGNITION_OFF	Generated when the ignition is turned off
TRAILER_DATA	Generated when the driver logs in with trailer information attached to the login
NEW_DRIVER	Generated when the driver logs into the device
NEW_OCCUPANT	Generated when an occupant logs into the device
INVALID_DRIVER	Generated when the driver ID used to login doesn't exist in the database
INVALID_OCCUPANT	Generated when the occupant ID used to login as an occupant doesn't exist in the database

5.23 Events By Category

Event Category	Events
VIOLATION	HARD_ACCEL, HARD_BRAKE, HARD_TURN, HARD_VERT, SPEEDING, SEATBELT, NO_DRIVER, PARKING_BRAKE, MICRO_SLEEP
WARNING	LOW_BATTERY, DEVICE_LOW_BATTERY, TAMPERING, IDLING, IGNITION_ON, POTENTIAL_TAMPERING, WIRELINE_ALARM, INSTALL, FIRMWARE_CURRENT, LOCATION_DEBUG, QSI_UPDATED, WITNESS_UPDATED, NO_INTERNAL_THUMB_DRIVE, WITNESS_HEARTBEAT_VIOLATION
NONE	NONE
EMERGENCY	CRASH, PANIC, MAN_DOWN, MAN_DOWN_CANCELED
ZONE	ZONES_ARRIVAL, ZONES_DEPARTURE



HOS	DOT_STOPPED, HOS_NO_HOURS, TRAILER_DATA
TEXT	TEXT_MESSAGE
DRIVER_LOGIN	NEW_DRIVER, NEW_OCCUPANT, INVALID_DRIVER, INVALID_OCCUPANT

5.24 Text Message

XML

```
<textMessage>
  <message>Hello World</message>
  <textMessageType>CUSTOM</textMessageType>
</textMessage>
```

JSON

```
{
  "textMessageType": "CUSTOM",
  "message": "Hello World"
}
```

Properties

Property	In/Out	Type	Required	Description
message	Request	String		Message text if textMessageType is CUSTOM. Maximum Length is 160 characters. Valid characters are letters, digits, space and period.
textMessageType	Request	TextMessageType		CUSTOM or canned text message type (DMR_1 .. DRM_20)



5.25 Sent Text Message

XML

```
<sentTextMessage>
  <driverID>78309</driverID>
  <driverName>Doe, Jane</driverName>
  <latitude>40.630322</latitude>
  <longitude>-111.814682</longitude>
  <message>TEST MESSAGE FROM DEVICE WS850 ON NOV 4</message>
  <messageType>CUSTOM</messageType>
  <time>2013-11-04T22:06:34Z</time>
  <vehicleID>58699</vehicleID>
  <vehicleName>WS850</vehicleName>
</sentTextMessage>
```

JSON

```
{
  "driverID": 78309,
  "driverName": "Doe, Jane",
  "vehicleID": 58699,
  "vehicleName": "WS850",
  "time": "2013-11-04T22:06:34Z",
  "latitude": 40.630322,
  "longitude": -111.814682,
  "messageType": "CUSTOM",
  "message": "TEST MESSAGE FROM DEVICE WS850 ON NOV 4"
}
```




Properties

Property	In/Out	Type	Required	Description
driverID	Response	Number		Unique driverID, allocated by the system on creation. Used to reference drivers in requests and other records
driverName	Response	String		Name of the driver
vehicleID	Response	Number		Unique vehicleID, allocated by the system on creation. Used to reference vehicles in requests and other records
vehicleName	Response	String		Name of the vehicle
time	Response	Date String		Time when driver sent the text message. Date string in standard ISO8601 format.
latitude	Response	Double 0 - 90		Latitude of location where driver sent the text message.
longitude	Response	Double -180 - 180		Longitude of location where driver sent the text message.
message	Response	String		Message text if textMessageType is CUSTOM. Maximum Length is 160 characters. Valid characters are letters, digits, space and period.
messageType	Response	TextMessageType		CUSTOM or canned text message type (DMR_1 .. DRM_20)

5.26 Text Message Type

Text Message Type	Message Text
CUSTOM	text supplied in Message field
DMR_1	DRIVING - EN ROUTE
DMR_2	ARRIVED LOCATION
DMR_3	RIG UP COMPLETED
DMR_4	PRESSURE TEST OK
DMR_5	READY TO PUMP



DMR_6	JOB IN PROGRESS
DMR_7	JOB COMPLETED OK
DMR_8	RIG DOWN COMPLETED
DMR_9	LEAVING LOCATION
DMR_10	FINISHED FOR DAY
DMR_11	VEHICLE PROBLEM
DMR_12	EQUIPMENT PROBLEMS
DMR_13	FLUID PROBLEMS
DMR_14	HSE PROBLEM
DMR_15	WAITING 3RD PARTY
DMR_16	WAITING SLB SUPPLY
DMR_17	JOB CANCELLED
DMR_18	JOB EXTENDED - 3HRS
DMR_19	JOB EXTENDED - 6HRS
DMR_20	JOB EXTENDED - 12HRS

5.27 Quality Rest

XML

```
<QualityRest>
  <driverEmployeeId>CJNEXUS</driverEmployeeId>
  <driverID>78309</driverID>
  <validity>VALID</validity>
  <fromDate>2013-11-01T06:00:00Z</fromDate>
  <qualityRestBlocks qualityRestState="RESTING" blockStart="2013-11-01T06:00:00Z"/>
  <qualityRestBlocks qualityRestState="RESTING" blockStart="2013-11-01T06:30:00Z"/>
  <qualityRestBlocks qualityRestState="RESTING" blockStart="2013-11-01T07:00:00Z"/>
  <qualityRestBlocks qualityRestState="RESTING" blockStart="2013-11-01T07:30:00Z"/>
  <qualityRestBlocks qualityRestState="RESTING" blockStart="2013-11-01T08:00:00Z"/>
</QualityRest>
```



JSON

```
{
  "driverEmployeeId": "CJNEXUS",
  "driverID": 78309,
  "validity": "VALID",
  "fromDate": "2013-11-01T06:00:00Z",
  "qualityRestBlocks": [
    {
      "blockStart": "2013-11-01T06:00:00Z",
      "qualityRestState": "RESTING"
    },
    {
      "blockStart": "2013-11-01T06:30:00Z",
      "qualityRestState": "RESTING"
    },
    {
      "blockStart": "2013-11-01T07:00:00Z",
      "qualityRestState": "RESTING"
    },
    {
      "blockStart": "2013-11-01T07:30:00Z",
      "qualityRestState": "RESTING"
    },
    {
      "blockStart": "2013-11-01T08:00:00Z",
      "qualityRestState": "RESTING"
    }
  ]
}
```



QualityRest Properties

Property	In/Out	Type	Required	Description
driverEmployeeID	Response	String		Customer specific unique driver identifier
driverID	Response	Number		Unique driverID, allocated by the system on creation. Used to reference drivers in requests and other records
valid	Response	Validity		VALID - valid hos data found for driver, NO_DATA - no hos data found for the driver
fromDate	Response	Date String		Time to start reporting from. This is the nearest 30 min increment from the request date.
qualityRestBlocks	Response	QualityRestBlock		List of quality rest data, one for each 30 minute block.

QualityRestBlock

Property	In/Out	Type	Required	Description
blockStart	Response	Date String		Time at start of block.
qualityRestState	Response	QualityRestState		Driver's rest state during the 30 minute block. If there is any time spent that is NOT in an off duty state, they are set to NOT_RESTING state for the entire block, otherwise they are RESTING.

QualityRestState

State	Description
NOT_RESTING	some time was spent in one of the hos on duty or driving states
RESTING	all time was spent in an hos off duty state
UNKNOWN	could not determine state



5.28 HOS Hours

XML

```
<HOSHours>
  <driverEmployeeId>CJNEXUS</driverEmployeeId>
  <hosRuleSetType>US_OIL</hosRuleSetType>
  <currentTime>2013-11-05T22:39:43Z</currentTime>
  <drivingRemaining>60</drivingRemaining>
  <onDutyRemaining>420</onDutyRemaining>
  <offDuty>0</offDuty>
  <driving>0</driving>
  <onDutyNotDriving>420</onDutyNotDriving>
  <sleeperBerth>0</sleeperBerth>
  <waitingAtWellSite>0</waitingAtWellSite>
</HOSHours>
```

JSON

```
{
  "driverEmployeeId": "CJNEXUS",
  "hosRuleSetType": "US_OIL",
  "currentTime": "2013-11-05T22:43:09Z",
  "drivingRemaining": 57,
  "onDutyRemaining": 417,
  "offDuty": 0,
  "driving": 0,
  "onDutyNotDriving": 423,
  "sleeperBerth": 0,
  "waitingAtWellSite": 0
}
```



HOS Hours Properties

Property	In/Out	Type	Required	Description
driverEmployeeID	Response	String		Customer specific unique driver identifier
hosRuleSetType	Response	HOS Rule Set Type		The HOS rule set the driving is currently using.
currentTime	Response	Date String		Current Time when request was made.
drivingRemaining	Response	Number		Number of minutes the driver is allowed to drive before violating any hos rules.
onDutyRemaining	Response	Number		Number of minutes the driver is allowed to stay on duty before violating any hos rules. Note: The driver is only in violation if they drive after this number reaches zero.
offDuty	Response	Number		Number of minutes the driver has been off duty since the last shift reset. Note: This includes time spent in the sleeper berth.
driving	Response	Number		Number of minutes the driver has been driving since the last shift reset.
onDutyNotDriving	Response	Number		Number of minutes the driver has been on duty and not driving since the last shift reset.
sleeperBerth	Response	Number		Number of minutes the driver has been in the sleeper berth since the last shift reset.
waitingAtWellSite	Response	Number		Number of minutes the driver has been waiting at a well site since the last shift reset.

5.28 Timeline

XML

```
<timelineStats driverEmployeeID="CJNEXUS" driverID="78309">
  <stats parkingTime="0" standingTime="0" idleTime="0" drivingTime="1800" blockStart="2013-11-04T23:00:00Z"/>
  <stats parkingTime="0" standingTime="0" idleTime="0" drivingTime="1800" blockStart="2013-11-04T23:30:00Z"/>
  <stats parkingTime="0" standingTime="0" idleTime="0" drivingTime="1800" blockStart="2013-11-05T00:00:00Z"/>
  <stats parkingTime="0" standingTime="0" idleTime="0" drivingTime="1800" blockStart="2013-11-05T00:30:00Z"/>
  <stats parkingTime="0" standingTime="0" idleTime="0" drivingTime="1800" blockStart="2013-11-05T01:00:00Z"/>
</timelineStats>
```



```
<stats parkingTime="0" standingTime="0" idleTime="0" drivingTime="1800" blockStart="2013-11-05T01:30:00Z"/>
<stats parkingTime="0" standingTime="0" idleTime="0" drivingTime="1800" blockStart="2013-11-05T02:00:00Z"/>
<stats parkingTime="0" standingTime="0" idleTime="0" drivingTime="1800" blockStart="2013-11-05T02:30:00Z"/>
<stats parkingTime="0" standingTime="0" idleTime="0" drivingTime="1800" blockStart="2013-11-05T03:00:00Z"/>
<stats parkingTime="0" standingTime="0" idleTime="0" drivingTime="1800" blockStart="2013-11-05T03:30:00Z"/>
<stats parkingTime="1189" standingTime="0" idleTime="0" drivingTime="611" blockStart="2013-11-05T04:00:00Z"/>
<stats parkingTime="1800" standingTime="0" idleTime="0" drivingTime="0" blockStart="2013-11-05T04:30:00Z"/>
<stats parkingTime="1800" standingTime="0" idleTime="0" drivingTime="0" blockStart="2013-11-05T05:00:00Z"/>
<stats parkingTime="1800" standingTime="0" idleTime="0" drivingTime="0" blockStart="2013-11-05T05:30:00Z"/>
<stats parkingTime="1800" standingTime="0" idleTime="0" drivingTime="0" blockStart="2013-11-05T06:00:00Z"/>
<stats parkingTime="1800" standingTime="0" idleTime="0" drivingTime="0" blockStart="2013-11-05T06:30:00Z"/>
<stats parkingTime="1800" standingTime="0" idleTime="0" drivingTime="0" blockStart="2013-11-05T07:00:00Z"/>
<stats parkingTime="1800" standingTime="0" idleTime="0" drivingTime="0" blockStart="2013-11-05T07:30:00Z"/>
<stats parkingTime="1800" standingTime="0" idleTime="0" drivingTime="0" blockStart="2013-11-05T08:00:00Z"/>
<stats parkingTime="1800" standingTime="0" idleTime="0" drivingTime="0" blockStart="2013-11-05T08:30:00Z"/>
<stats parkingTime="1800" standingTime="0" idleTime="0" drivingTime="0" blockStart="2013-11-05T09:00:00Z"/>
<stats parkingTime="1800" standingTime="0" idleTime="0" drivingTime="0" blockStart="2013-11-05T09:30:00Z"/>
<stats parkingTime="1800" standingTime="0" idleTime="0" drivingTime="0" blockStart="2013-11-05T10:00:00Z"/>
<stats parkingTime="1800" standingTime="0" idleTime="0" drivingTime="0" blockStart="2013-11-05T10:30:00Z"/>
<stats parkingTime="1800" standingTime="0" idleTime="0" drivingTime="0" blockStart="2013-11-05T11:00:00Z"/>
<stats parkingTime="1800" standingTime="0" idleTime="0" drivingTime="0" blockStart="2013-11-05T11:30:00Z"/>
<stats parkingTime="1800" standingTime="0" idleTime="0" drivingTime="0" blockStart="2013-11-05T12:00:00Z"/>
<stats parkingTime="1800" standingTime="0" idleTime="0" drivingTime="0" blockStart="2013-11-05T12:30:00Z"/>
<stats parkingTime="1800" standingTime="0" idleTime="0" drivingTime="0" blockStart="2013-11-05T13:00:00Z"/>
<stats parkingTime="1800" standingTime="0" idleTime="0" drivingTime="0" blockStart="2013-11-05T13:30:00Z"/>
<stats parkingTime="1800" standingTime="0" idleTime="0" drivingTime="0" blockStart="2013-11-05T14:00:00Z"/>
<stats parkingTime="1800" standingTime="0" idleTime="0" drivingTime="0" blockStart="2013-11-05T14:30:00Z"/>
<stats parkingTime="1800" standingTime="0" idleTime="0" drivingTime="0" blockStart="2013-11-05T15:00:00Z"/>
<stats parkingTime="599" standingTime="0" idleTime="0" drivingTime="1201" blockStart="2013-11-05T15:30:00Z"/>
<stats parkingTime="0" standingTime="0" idleTime="0" drivingTime="1800" blockStart="2013-11-05T16:00:00Z"/>
<stats parkingTime="0" standingTime="0" idleTime="0" drivingTime="1800" blockStart="2013-11-05T16:30:00Z"/>
<stats parkingTime="0" standingTime="0" idleTime="0" drivingTime="1800" blockStart="2013-11-05T17:00:00Z"/>
<stats parkingTime="0" standingTime="0" idleTime="0" drivingTime="1800" blockStart="2013-11-05T17:30:00Z"/>
<stats parkingTime="0" standingTime="0" idleTime="0" drivingTime="1800" blockStart="2013-11-05T18:00:00Z"/>
<stats parkingTime="0" standingTime="0" idleTime="0" drivingTime="1800" blockStart="2013-11-05T18:30:00Z"/>
<stats parkingTime="0" standingTime="0" idleTime="0" drivingTime="1800" blockStart="2013-11-05T19:00:00Z"/>
```



```
<stats parkingTime="0" standingTime="0" idleTime="0" drivingTime="1800" blockStart="2013-11-05T19:30:00Z"/>
<stats parkingTime="0" standingTime="0" idleTime="0" drivingTime="1800" blockStart="2013-11-05T20:00:00Z"/>
<stats parkingTime="0" standingTime="0" idleTime="0" drivingTime="1800" blockStart="2013-11-05T20:30:00Z"/>
<stats parkingTime="0" standingTime="0" idleTime="0" drivingTime="1800" blockStart="2013-11-05T21:00:00Z"/>
<stats parkingTime="0" standingTime="0" idleTime="0" drivingTime="1800" blockStart="2013-11-05T21:30:00Z"/>
<stats parkingTime="0" standingTime="0" idleTime="0" drivingTime="1800" blockStart="2013-11-05T22:00:00Z"/>
<stats parkingTime="0" standingTime="0" idleTime="0" drivingTime="1800" blockStart="2013-11-05T22:30:00Z"/>
</timelineStats>
```

JSON

```
{
  "driverID": 78309,
  "driverEmployeeID": "CJNEXUS",
  "stats": [
    {
      "blockStart": "2013-11-04T23:30:00Z",
      "drivingTime": 1800,
      "idleTime": 0,
      "standingTime": 0,
      "parkingTime": 0
    },
    {
      "blockStart": "2013-11-05T00:00:00Z",
      "drivingTime": 1800,
      "idleTime": 0,
      "standingTime": 0,
      "parkingTime": 0
    },
    ....
    {
      "blockStart": "2013-11-05T22:30:00Z",
      "drivingTime": 1800,
      "idleTime": 0,
```




```
"standingTime": 0,
"parkingTime": 0
},
{
  "blockStart": "2013-11-05T23:00:00Z",
  "drivingTime": 931,
  "idleTime": 0,
  "standingTime": 0,
  "parkingTime": 869
}
]
```

Timeline Properties

Property	In/Out	Type	Required	Description
driverEmployeeID	Response	String		Customer specific unique driver identifier
driverID	Response	Number		Unique driverID, allocated by the system on creation. Used to reference drivers in requests and other records
status	Response	List of TimelineBlockStats		Stats for each 30 minute increment in the time line.

TimelineBlockStats

Property	In/Out	Type	Required	Description
blockStart	Response	Date String		Time at start of the 30 minute block
drivingTime	Response	Number		Number of driving seconds in the 30 minute block.
idleTime	Response	Number		Number of idling seconds in the 30 minute block.
standingTime	Response	Number		Always zero.



parkingTime	Response	Number		Number of parking seconds in 30 minute block (any time not driving or idling).
-------------	----------	--------	--	--

5.29 Stops

XML

```
<stops>
  <stop>
    <depart>2013-11-07T07:01:45Z</depart>
    <drive>0</drive>
    <driverID>8442</driverID>
    <highidle>0</highidle>
    <idle>0</idle>
    <latitude>33.0105</latitude>
    <longitude>-117.1105</longitude>
    <lowidle>0</lowidle>
    <vehicleID>8520</vehicleID>
    <wait>0</wait>
    <zoneID>0</zoneID>
    <zoneName></zoneName>
  </stop>
  <stop>
    <arrive>2013-11-07T07:02:48Z</arrive>
    <depart>2013-11-07T07:03:00Z</depart>
    <drive>63</drive>
    <driverID>8442</driverID>
    <highidle>8</highidle>
    <idle>0</idle>
    <latitude>33.0139</latitude>
    <longitude>-117.11216</longitude>
    <lowidle>4</lowidle>
    <totaltime>12</totaltime>
    <vehicleID>8520</vehicleID>
```



```
<wait>0</wait>
<zoneID>0</zoneID>
<zoneName></zoneName>
</stop>
...
<stop>
  <arrive>2013-11-07T07:24:30Z</arrive>
  <drive>690</drive>
  <driverID>8442</driverID>
  <highidle>0</highidle>
  <idle>0</idle>
  <latitude>32.9603</latitude>
  <longitude>-117.2107</longitude>
  <lowidle>0</lowidle>
  <vehicleID>8520</vehicleID>
  <wait>0</wait>
  <zoneID>0</zoneID>
  <zoneName></zoneName>
</stop>
</stops>
```

JSON

```
{
  "stops": [
    {
      "driverID": 8442,
      "latitude": 33.0105,
      "longitude": -117.1105,
      "vehicleID": 8520,
      "zoneID": 0,
      "zoneName": "",
      "arrive": null,
      "depart": "2013-11-07T07:01:45Z",
      "totaltime": null,
    }
  ]
}
```

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```
"wait": 0,  
"idle": 0,  
"lowidle": 0,  
"highidle": 0,  
"drive": 0  
},  
{  
  "driverID": 8442,  
  "latitude": 33.0139,  
  "longitude": -117.11216,  
  "vehicleID": 8520,  
  "zoneID": 0,  
  "zoneName": "",  
  "arrive": "2013-11-07T07:02:48Z",  
  "depart": "2013-11-07T07:03:00Z",  
  "totaltime": 12,  
  "wait": 0,  
  "idle": 0,  
  "lowidle": 4,  
  "highidle": 8,  
  "drive": 63  
},  
...  
{  
  "driverID": 8442,  
  "latitude": 32.9603,  
  "longitude": -117.2107,  
  "vehicleID": 8520,  
  "zoneID": 0,  
  "zoneName": "",  
  "arrive": "2013-11-07T07:24:30Z",  
  "depart": null,  
  "totaltime": null,  
  "wait": 0,  
  "idle": 0,  
  "lowidle": 0,
```



```
"highidle": 0,  
"drive": 690  
}  
]  
}
```

Response Code

DriverStop Properties

Property	In/Out	Type	Required	Description
driverID	Response	Number		Unique driverID, allocated by the system on creation. Used to reference drivers in requests and other records
latitude	Response	Double 0 - 90		Latitude of location where driver stopped.
longitude	Response	Double -180 - 180		Longitude of location where driver stopped.
vehicleID	Response	Number		Unique vehicleID, allocated by the system on creation. Used to reference vehicles in requests and other records
zoneID	Response	Number		Unique zoneID, allocated by the system on creation. Used to reference zones in requests and other records. Set if stop took place within a zone.
zoneName	Response	String		Name of zone where stop took place Set if stop took place within a zone.
arrive	Response	Date String		Time the driver arrived at the stop.
depart	Response	Date String		Time driver departed from the stop.
totaltime	Response	Number		Seconds spent at the stop, includes waiting time, low idle time and high idle time.
wait	Response	Number		Seconds waiting at the stop. Does not include idle time.
lowidle	Response	Number		Seconds of low idle time at the stop.
highidle	Response	Number		Seconds of high idle time at the stop.
drive	Response	Number		Seconds of driving time.