



Application Programming Interface:

The Data Behind SaferBus



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Office of Research and Information Technology

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Agenda

- SaferBus App
 - Background
 - What it Does
 - How it Works
- Why an API?
- SaferBus API
- Motorcoach Safety Data Student Challenge



SaferBus – Background

- April 2011
 - White House Executive Order on Open Government & Customer Service
- August/September 2011
 - FMCSA Motorcoach Roundtables
 - National Motorcoach Safety Summit
- October 2011
 - DOT Customer Service Plan Signature Initiative
- March 2012
 - SaferBus released



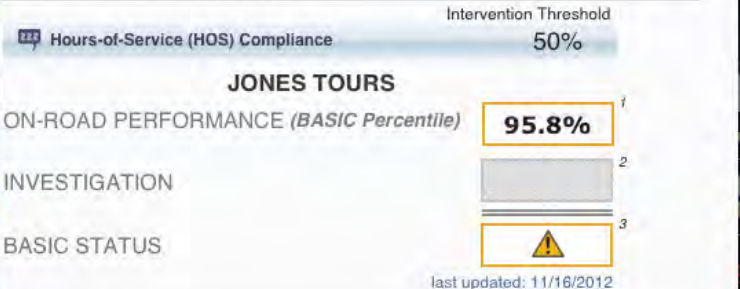
SaferBus – What it Does

- SaferBus gives travelers a quick and easy way to look up company safety records
- Encourage consumers to make informed decisions
 - Based on safety rather than cost alone



Hours-of-Service (HOS) Compliance //

Operation of CMVs by drivers who are ill, fatigued, or in non-compliance with the Hours-of-Service (HOS) regulations. (FMCSR Parts 392 and 395)



¹ Behavior Analysis and Safety Improvement Categories (BASIC) percentiles range between 0 (best) and 100 (worst) and are calculated for companies with sufficient data related to each BASIC. Within each BASIC, a percentile is assigned from 0 to 100 based on the companies safety compliance. For example, a percentile value of 95 means that the company performed WORSE than 95% of the companies in the group (higher BASIC measures indicate less compliance).

² Denotes serious violation cited within last 12 months from an investigation.

³ Denotes this carrier exceeded the FMCSA intervention threshold relative to its safety event grouping based upon roadside data and/or has been cited with one or more serious violations within the past 12 months during an investigation. Therefore this carrier may be prioritized for an intervention action and roadside inspection. Please read the use of SMS Data/Information on the About tab.

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JONES TOURS

DBA Name: JONE
 U.S. DOT Number
 U.S. MC Number:
 Telephone: (301) 7
 Fax:

Leave Complaint

- J F Q BUS
 - JDR TOURS
 - JONES TO
 - K Q CHAR
 - LOGOBAZOOKA TOURS
 - NEW LINE TOURS
- Not Allowed to Operate
- Not Allowed to Operate



SaferBus – How it Works

- SaferBus accesses FMCSA data using an Application Programming Interface (API)
 - Data is not stored on the device
 - Real-time search of data on FMCSA servers



Why an API?

- For SaferBus:
 - Ensures the display of the most up-to-date info
 - Allows for easy maintenance – in one location
- For FMCSA's Mission
 - API's support the Open Government Directive
 - Allows developers to build apps that combine data from multiple sources
 - Speeds product development, builds markets
 - Engages the crowd as partners

API Examples

The image shows a screenshot of the WTOP website. The top navigation bar includes the WTOP logo (103.5 FM), a home icon, and a 'Listen' dropdown menu. On the right, there are links for 'Log In', 'Sign Up', and 'WTOP Mobile'. A search bar is also present. The weather section for Washington, DC shows a current temperature of 44°F and a forecast for Saturday, Sunday, and Monday. A red circle highlights this weather information. Below the navigation is a 'SCOUT' alert service banner. The banner text reads: 'GET ALERTS WHEN CONGRESS OR YOUR STATE CAPITOL TALKS ABOUT ISSUES YOU CARE ABOUT'. A search input field contains the text 'commercial vehicle' and is highlighted with a red circle. To the right of the input field is a 'GET STARTED' button. Below the banner, there are three columns: 'SCOUT TUTORIAL', 'USING SCOUT' (with a list of features), and 'SUGGESTED SUBSCRIPTIONS' (with a list of subscription options).



What's an API?

- API is a set of software instructions and standards that allows machine to machine communication
- API's are a combination of
 - *Protocol*: the means of interacting with data and services
 - REST (Representational State Transfer)
 - *Format*: the model by which the data and services are arranged
 - JSON (JavaScript Object Notation)
 - XML (Extensible Markup Language)

FMCSA's Developer Page

<https://mobile.fmcsa.dot.gov/developer/home.page>



U.S. Department of Transportation
Federal Motor Carrier Safety Administration



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Applications using FMCSA API?
Please create a free API key.

Create an API Key

If you don't have a **Developer Account**
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Federal Motor Carrier Safety Administration

1200 New Jersey Avenue SE, Washington, DC 20590 • 1-800-832-5660 • TTY: 1-800-877-8339 • [Field Office Contacts](#)



SaferBus – API Input

```
https://service/  
    resource/version/  
        /action/{option}
```







```
https://mobile.fmcsa.dot.gov/saferbus/  
    resource/v1//  
    carrier/{DOT #}
```

```
https://mobile.fmcsa.dot.gov/  
    saferbus/resource/v1/  
        carrier/860030  
        { .xml | .json }?webkey=jk+k..
```

SaferBus – API Output

```
<Carrier>  
<allowToOperate>Y</allowToOperate>  
<outOfService>N</outOfService>  
<outOfServDate>null</outOfServDate>  
<dotNumber>860030</dotNumber>  
<mcNumber>null</mcNumber>  
<legalName>Jones Tours</legalname>  
<dbaName>Jones Tours</dbaName>  
<motorcoachVehicle>4</motorcoachVehicle>  
<phyCity>Forrestville</phyCity>  
</Carrier>
```

SaferBus – API Output

 **JONES TOURS**     

DBA Name: JONES TOURS		
U.S. DOT Number: 860030	Address:	Motorcoaches: 4
U.S. MC Number:	8014 MARLBORO PIKE	School Buses: 0
Telephone: (301) 736-4994	Forrestville, MD 20747	Limousines: 0
Fax:		Mini-buses: 0
		Vans: 0

[Leave Complaint](#)



SaferBus – API Stats

- 62 registered users
- More than 2 million requests

USDOT Motorcoach Safety Data Student Challenge

<http://studentsafetydata.challenge.gov/>

Challenge.gov powered by ChallengePost

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US DOT Motorcoach Safety Data Student Challenge

FOLLOW 86 followers **16** days left to submit (view all dates)

Submissions due	January 31
Judging Ends	March 8
Winners Announced	March 15

ACCEPT THIS

Get notified of important changes and opportunities for participants.

Thank You

jon.mueller@dot.gov

202-366-9409



The advertisement features a stylized orange bus icon on the left with a large QR code on its front. The text "SAFERBUS" is written above the QR code. To the right of the bus, the text "Your best **BUS TRIP** planning resource!" is displayed in white and yellow. Below this text is a yellow download icon followed by the text "Download the SaferBus Mobile App" and a small image of the app's interface. At the bottom left is the U.S. Department of Transportation logo, and at the bottom right is the text "U.S. Department of Transportation Federal Motor Carrier Safety Administration".

SAFERBUS

Your best **BUS TRIP** planning resource!

Download the SaferBus Mobile App

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