

# O<sub>2</sub> Litmus

View Connection Status API  
Developer Guide

## 1 Document History

### 1.1 Document Detail

<b>Title:</b>	View Connection Status API O2 Litmus Developer Guide
<b>Owner:</b>	O2 Litmus Support Team

### 1.2 Intended audience

This document is intended for use by registered O2 Litmus developers to gain an understanding of the O2 Litmus developer environment and guidance on how develop applications using the View Connection Status API.

### 1.3 Document Revision History

Version	Date	Author	Comments
1.0	December 2008	O2 Litmus Support Team	First Version
2.0	May 2009	O2 Litmus Support Team	SOA Version

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## 2 Introduction

The View Connection Status API provides key functions to enable O2 Litmus Developers to query the O2 UK Cellular Network Bearer when an O2 UK customer is connected to the Internet through their mobile handset.

Via calls to this API. Developers will be able to ascertain if the customer using their application is connected to the O2 UK cellular network on either a GPRS (2.5G) or UMTS (3G) speed connection.

This information is important to allow developers to customise the user experience of their application e.g. deliver low res images or video to 2.5G connections, and high res images and video to 3G connections.

The O2 Litmus Platform offers well-defined interfaces based on Web services.

Web Service based interfaces ensure that the parameter types used by each of the O2 Litmus API's are common wherever possible. The O2 Litmus Platform will validate Web Services requests to ensure that malformed requests are not passed on to the API. If malformed requests are presented by applications they are rejected and an exception is returned to the application.

Therefore all O2 Litmus applications requiring access to an O2 Litmus API will need to be developed using the Web service interface definitions provided within this document.

### 2.1 Glossary

Within this document the following definitions are used:

Term	Description
Client	The caller of the Connection Status API.
Customer	Partners who make use of the Network Connection Status API capabilities
ID	Identity
IP	Internet Protocol
MSISDN	The internationally formatted mobile number, this should start with the country code, and not have a plus (+) i.e. 447712345678.
SOA	Service Oriented Architecture
SOAP	Simple Object Access Protocol
XML	eXtended Mark-up Language

### 3 Interfaces

As it is explained in the developer guide, the invocation to the services enabled in Litmus requires using a WS-Security SOAP header in all the requests to the services. This header must contain the developer username, the developer password and the application Id and it is recommended to include a transaction Id header to track the request. You can see an example of a security header in the O2 Litmus Development Guide: "8.4 Sample Request XML (Generated by soapUI)".

This API provides the following method to interface with the platform:

- getBearer

#### 3.1 getBearer

This method provides information about the network bearer the msisdn (via the IP) is connected to. Following sections describe the contents of a request and a response for it.

##### 3.1.1 getBearer Request

The following table shows an example request for this service with the soap header.

```
<soapenv:Envelope xmlns:cor="http://soa.o2.co.uk/coredata_1"
xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:view="http://soa.o2.co.uk/viewconnectionstatusdata_1">
  <soapenv:Header>
    <wsse:Security soapenv:mustUnderstand="1" xmlns:wsse="http://docs.oasis-
open.org/wss/2004/01/oasis-200401-wss-wssecurity-secext-1.0.xsd">
      <wsse:UsernameToken wsu:Id="UsernameToken-19293074" xmlns:wsu="http://docs.oasis-
open.org/wss/2004/01/oasis-200401-wss-wssecurity-utility-1.0.xsd">
        <wsse:Username>USERNAME@APPLICATION_ID</wsse:Username>
        <wsse:Password Type="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-username-
token-profile-1.0#PasswordText">PASSWORD</wsse:Password>
        <wsse:Nonce>LxEsFc8yW8TkR056S/OFsA==</wsse:Nonce>
        <wsu:Created>2009-04-20T11:27:29.789Z</wsu:Created>
      </wsse:UsernameToken>
    </wsse:Security>
    <cor:SOAConsumerTransactionID>56576679823</cor:SOAConsumerTransactionID>
  </soapenv:Header>
  <soapenv:Body>
    <view:getBearer>
      <view:ipAddress>IP_ADDRESS</view:ipAddress>
      <view:applicationReference>APPLICATION_REFERENCE </view:applicationReference>
      <view:subMerchantId>SUBMERCHANT_ID</view:subMerchantId>
    </view:getBearer>
  </soapenv:Body>
</soapenv:Envelope>
```

The following table explains the View Connection Status API request parameters to invoke the getDevice operation.

Parameter	Data Type	Required	Comments	Format
IP_ADDRESS	Text	YES	The IP Address of the SIM for which the Bearer is required	The recognized format is nnn.nnn.nnn.nnn where n is a integer.e.g. Valid value 34.129.43.876 and Invalid value 034.129.43.876.
APPLICATION_REFERENCE	Text	YES	An identifier supplied by the client application to identify this request within their system.	Fixed length = 30 If this field is null the enabler will log NULL but will append extra leading spaces with SOAConsumerTransactionId to make it exact 30 characters long and set it as application reference in the response.
SUB_MERCHANT_ID	Text	YES	An identifier supplied by the client application to identify this request within their system.	Maximum allowed length is 30

### 3.1.2 getBearer Response

Following table contains an example of a part of a getBearer response, with all the elements explained below.

```
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/">
  <soap:Body>
    <ns3:getBearerResponse xmlns:ns2="http://soa.o2.co.uk/viewconnectionstatusdata_1"
xmlns:ns3="http://www.o2litmus.co.uk/devProxy/litmusapis/ViewConnectionStatus"
xmlns:ns4="http://soa.o2.co.uk/coredata_1">
      <GetBearerResponse>
        <ns2:code>CSA0000S</ns2:code>
        <ns2:description>The request is completed successfully</ns2:description>
        <ns2:bearer>2</ns2:bearer>
      </GetBearerResponse>
    </ns3:getBearerResponse>
  </soap:Body>
</soap:Envelope>
```

Following table explains the View Connection Status API response parameters of getBearer.

Parameter	Data Type	Comments	Format
Code	Text	A unique code identifying the response. This code will be from the predefined list of codes in View Connection Status.	This code will be from the predefined list of codes in CSA Adapter. e.g CSA0000S
Description	Text	Explains the meaning of the code.	Descriptive message about the operation status. e.g 'The request is completed

Parameter	Data Type	Comments	Format
			successfully' in case of successful response.
Bearer	Text	Unique Identifier identifying Bearer returned for the IP_ADDRESS. The valid values are: 1 (representing GPRS) 2 (representing UMTS).	A String containing the Bearer retrieved.

## 4 Network Connection Status API Status Codes

The following table defines command status values returned by the Network Connection Status API to the SAG.

Status Code	Type	External Description
<b>viewconnectionstatus-11300-3002-E</b>	Error	No MSISDN recorded for the IP address.
<b>viewconnectionstatus-11300-3003-E</b>	Error	No Bearer recorded for the IP address.
<b>viewconnectionstatus-11300-3000-E</b>	Error	IP Address not found.
<b>viewconnectionstatus-11300-3001-E</b>	Error	The user is not connected.
<b>viewconnectionstatus-11300-3004-E</b>	Error	An unknown error has occurred
<b>viewconnectionstatus-11300-2000-F</b>	Fault	Unable to connect to backend. Please try again later.
<b>viewconnectionstatus-11300-2001-F</b>	Fault	Internal System Error, request is unsuccessful..
<b>viewconnectionstatus-11300-2002-F</b>	Fault	One or more backend system is not available. Please try again later
<b>viewconnectionstatus-11300-4000-V</b>	Input Validation Error	Invalid Request

## 5 Connectivity

### Network Connection Status API

Reference environment:

<https://be.o2litmus.co.uk/devProxyFake/litmusapis/ViewConnectionStatus?wsdl>

Live environment:

<https://be.o2litmus.co.uk/devProxy/litmusapis/ViewConnectionStatus?wsdl>

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