Avis Budget Group EMEA
Direct Connect - Technical Guide to Connectivity

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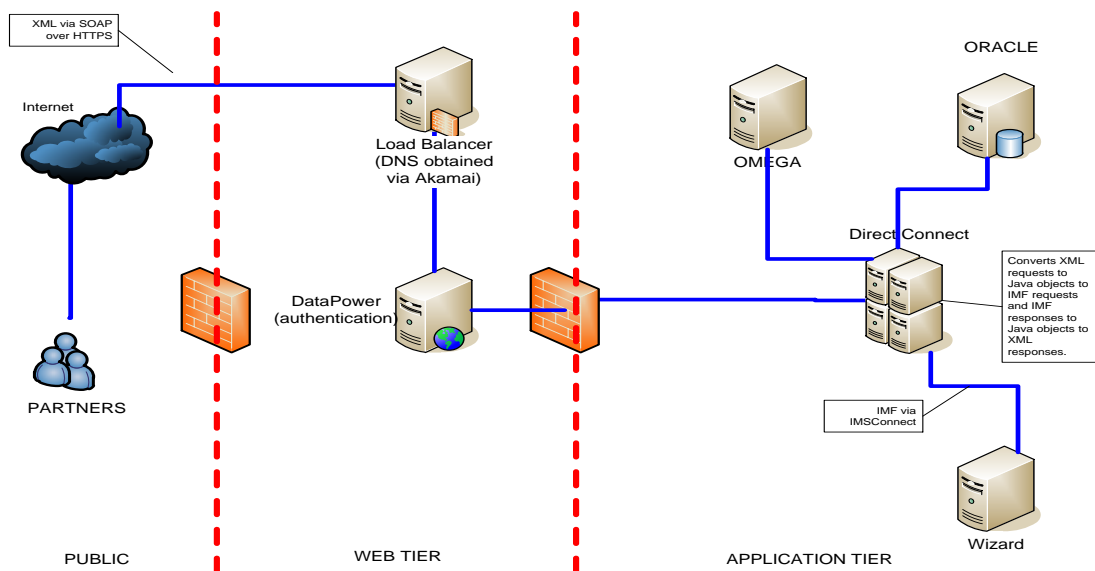
Direct Connect Overview

Direct Connect is a B2B web service link from the ABG partner IT systems to the ABG Wizard / Maestro systems using these IT and industry standards:

--Open Travel Alliance XML www.opentravel.org
--XML E**X**tensible **M**arkup **L**anguage
--SOAP - XML delivery mechanism
--Https - secure connection

The web service is provided and maintained by Avis Budget Group US IT team, it is:

--hosted by IBM web Hosting facilities in Boulder, Colorado and Columbus, Ohio
--a direct, secure Internet link from partner
--a real-time – request and response web service
--a resilient, reliable, efficient and scalable service

ABG / IBM Direct Connect infrastructure

XML via SOAP over HTTPS

Internet

Load Balancer
(DNS obtained
via Akamai)

ORACLE

OMEGA

Direct Connect

Converts XML requests to Java objects to IMF requests and IMF responses to Java objects to XML responses.

DataPower
(authentication)

PARTNERS

IMF via
IMSConnect

Wizard

PUBLIC   WEB TIER   APPLICATION TIER

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The Open Travel Alliance website www.opentravel.org includes a link to their Wiki (http://wiki.opentravel.org/index.php/Main_Page) which hosts an implementation guide.

The specification version used by Avis Budget Group is currently 2008A.

Web service urls and firewall rules

Test web service endpoint uri:

https://qaservices.carrental.com/wsbang/HTTPSOAPRouter/ws9071

Production web service endpoint uri:

https://services.carrental.com/wsbang/HTTPSOAPRouter/ws9071

The Direct Connect web service does not block any incoming IP addresses. Access is controlled by TLS security and Userid / Password in the SOAP message.

The web service uses the **Akamai Dynamic Site Accelerator** product to route XML requests to the IBM data centres in Boulder and Columbus in the US efficiently. The service does not use fixed IP addresses and these will change constantly to optimise the route taken to the web service.

For this reason any firewall rules set up by the partner should be based on dns rather than IP address and allow access to:

- *qaservices.carrental.com* domain for the test web service
- *services.carrental.com* domain for the production web service

on port **443** (for https).

Http traffic on port 80 is not supported. Only TLS 1.2 transport layer security is supported.

At times of peak rate shopping and booking volume our mainframe systems can take longer than the usual sub 2 seconds time to respond to XML requests.

To ensure that our Wizard system is not then flooded with retried requests at these times we would strongly recommend that the minimum time-out value used for DC requests is 10 seconds and that the request is retried only once after a timeout.

As Direct Connect is a web service, XML messages cannot be sent directly through an Internet browser.

The **Target** attribute in the request message headers does not determine qa or production access which is controlled by uri only. Access to the production web service will only be allowed after sign-off of each partner's development.

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WSDL

For partner developer use a WSDL (Web Services Description Language) description
of Direct Connect is accessible in the qaservices test web service describing the web service
and operations offered.

The WSDL is located at https://qabook1.carrental.com/wsdl/ABG-DC.wsdl

 The associated schema xsd is at https://qabook1.carrental.com/wsdl/ABG-DC-OTA.xsd

The xsd includes the ABG extension to the OTA 2008A specification to support the
VehGroup element which allows a specific SIPP code or Vehicle Group letter to be specified
in the XML request messages.

The original OTA schema can be downloaded from
http://www.opentravel.org/Specifications/SchemaIndex.aspx?FolderName=2008A

It is recommended that partner logs all XML messages sent and received once the
development is live. These requests will be needed to report any Incidents with the web
service to our IT Service Desk.

SOAP / web service testing

A SOAP testing tool such as soapUI is recommended which can quickly generate test
SOAP/XML requests from the wsdl provided.

**Please do not run load or stress tests against the web service without obtaining
permission from Avis Budget Group. These will never be permitted against the
production web service.**

Site Confidence monitoring

The production Direct Connect web service is monitored by Site Confidence.
Click here to check the real-time Current service status.

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Sample connectivity code

If using Microsoft .NET this C# code can be used for sending messages and receiving responses.

- url value should be -

    https://qaservices.carrental.com/wsbang/HTTPSOAPRouter/ws9071

- requestXml is the XML message (including SOAP envelope) to be sent.

```csharp
public static string PostRequest(string url, string requestXml)

    {
        string responseText = string.Empty;
        HttpWebRequest request;
        WebResponse response;
        StreamReader reader;
        try
        {
            request = (HttpWebRequest)WebRequest.Create(url);
            request.Method = WebRequestMethods.Http.Post;
            request.Headers.Add("ContentType:Text/Xml");
            StreamWriter writer = new
                    StreamWriter(request.GetRequestStream());
            writer.Write(requestXml);
            writer.Close();

            response = request.GetResponse();
              reader = new
StreamReader(response.GetResponseStream());
            responseText = reader.ReadToEnd();
            response.Close();
        }


        catch (WebException wex)

        {
            response = wex.Response;
            reader = new
StreamReader(response.GetResponseStream());
            responseText = reader.ReadToEnd();
            response.Close();
        }

        catch (System.Exception ex)

        {
            MessageBox.Show(ex.Message, "Http Exception",
                    MessageBoxButtons.OK, MessageBoxIcon.Error);
        }
        return responseText;
    }
```

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