AdFalcon Server API 2.0 Integration Developer's Guide

AdFalcon Mobile Ad Network

Product of

Noqoush Mobile Media Group

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1 Overview

This document aims at providing developers with instructions and guidance on how to access and integrate with AdFalcon Server API from within the server side part of their Mobile Device Application or Mobile Website.

Through sending Post or Get HTTP Requests with predefined parameters to the AdFalcon network, our system will be able to detect your application, the device its running on and its location as well as other useful information that would help AdFalcon to serve a targeted ad for the Mobile App users and audience.

2 Ad Request

Request Structure

The AdFalcon Server API supports both get and post HTTP Requests.

When sending a request, the standard Internet media type is "application/x-www-form-urlencoded". This is a format for encoding key-value pairs with possibly duplicate keys. Each key-value pair is separated by an '&' character, and each key is separated from its value by an '=' character.

Keys and values are both escaped by replacing spaces with the '+' character and then using URL encoding on all other non-alphanumeric characters.

For example,

the key-value pair

Name: Jonathan Doe Age: 23 Formula: a + b == 13%!

Is encoded as

Name=Jonathan+Doe&Age=23&Formula=a+%2B+b+%3D%3D+13%25%21

AdFalcon Service URL

The URL of AdFalcon Server API is:

http://api.adfalcon.com/AdRequest/GetAd

Required Parameters

There are a collection of parameters that are mandatory in all ad requests. If you do not fill the required parameters in a correct way, AdFalcon network will not be able to respond back with an appropriate ad.

Common Parameters

- **Site ID (R_SID)**
  This parameter is the unique ID for your application or website in AdFalcon system.
- **Ad Format (R_F)**
  AdFalcon supports three types of ad formats which are

Format	Description
JSON	JSON formatted response
BASIC_HTML	Simple HTML without JavaScript

XHTML	XHTML 1.1 with JavaScript format.

- **IP (R_IP)**
  This parameter is the IP Address of the mobile devices to which the Ad will be delivered. The IP Address helps AdFalcon to identify the country and carrier of the device.

  You can get the IP Address of the device making the request from the HTTP header **REMOTE_ADDR**.

  If you have an intermediate server (proxy) between the device and your server you can get the device IP address from HTTP header **X_FORWARDED_FOR**.

- **User agent (D_UA)**
  The User agent of the device making the request. This helps AdFalcon to identify the device's specifications and capabilities.

  You can get the user-agent of the device making the request from HTTP header **USER-AGENT**.

- **Version (R_V)**
  The version of the AdFalcon Server API on which the integration has been implemented. The current version is: **api-all-2.0.0**

Mobile Web Parameters

- **URL (R_URL)**
  The URL of the page that is originating the ad request.

  Note: This parameter is mandatory in *case of request is originated from Mobile Web. In case in-app ads, this parameter should be omitted.*

- **HTTP Headers of end-user browser (R_HH_HEADERNAME)**
  HTTP headers sent by the user's device. In order to pass header values use the following format: R_HH_HEADERNAME = header value. Header name should be in capital letters only.

  Example

  R_HH_REMOTE-ADDR=94.249.59.107&R_HH_USER-AGENT=keep-alive…etc.

Optional Parameters

The optional parameters are extra information related to the user and device which helps AdFalcon's ads selector engine to get the most relevant ads for the user.

The most important optional parameters are:

- **Test Mode (R_TM)**

  A boolean intended to inform AdFalcon network about application or web is under the development or maintenance mode. Ex. R_TM: true

  Note: *Ensure Test Mode Parameter is set to false before releasing your application to the public.*

- **Ad Type (R_ADTYPE)**

  This parameter is used to specify what ad types are supported by the client requesting the ad. The ad types are presented in comma separated list.

  Below are the supported types.

Ad Type	Value
Banner	b
Text	t
Plain HTML	ph
Rich Media	rm

  Note: *If this parameter is not specified, AdFalcon assumes the client supports all types and the ad server will choose an ad regardless of its type. On the other side, sending more than one Ad type (separated by comma, such as "b,t,ph") means that AdFalcon will only return ads of the specified types.*

- **Rich Media Supported Protocol (D_RMSupport)**

  This parameter is used to list the supported rich media standards in comma separated format. Below are the possible values.

Protocol	Value
MRAID1	m1
MRAID2	m2

  Note: *If this parameter is not specified, AdFalcon server will consider that the device is not supporting any rich media standard.*

- **Ad Unit size (R_AS)**

  This parameter identifies the ad unit size to be delivered by AdFalcon. Below are the supported sizes.

Ad size	Value	Comment
320x50	10	
300x50	2	
216x36	3	

168x28	4	
120x20	5	
468x60	6	
728x90	7	
300x250	8	
120x600	9	
Interstitial_320x480	11	Smartphones Interstitial. Returns Ad with one of the following unit sizes: • *320* x *480 if the device is portrait* • *480* x *320 if the device is landscape* • *Or 300* x *250*
Interstitial_768x1024	12	Tablet Interstitial. Returns Ad with one of the following unit sizes: • *768* x *1024 if the device is portrait* • *1024* x *768 if the device is landscape* • *600* x *1024 if the device is android with smaller screen and is portrait* • *1024* x *600 if the device is android with smaller screen and is landscape* • *Or 500* x *480*
Interstitial_Auto	13	Used in case of universal apps where it will automatically fall back to Interstitial_320x480 when the device is a smartphone or Interstitial_1024x768 when the device is tablet.

Note: *If this Ad Unit Size parameter is not specified, AdFalcon server will choose the best ad size that is suitable for the device's screen resolution but not an Interstitial ad.*

Note: *In order to request an interstitial ad, you will be need to specify one of the interstitial ad unit sizes: Interstitial_320x480, Interstitial_1024x768 or Interstitial_Auto.*

Note: *If an Ad Unit Size parameter is specified, AdFalcon will only return an Ad with the requested unit size. If there is no ad of the requested unit size, the server will return "No Ad Available".*

The only exception for this rule is when requesting an interstitial ad unit sizes, in this case the following is applied:

- *When requesting intestinal ad for smartphone (*Interstitial_320x480) *, the server will return one of the following unit sizes:*
  - *320* x *480 if the device is portrait*
  - *480* x *320 if the device is landscape*
  - *Or 300* x *250*
- *When requesting intestinal ad for smartphone (*Interstitial_768x1024) *, the server will return one of the following unit sizes*
  - *768* x *1024 if the device is portrait*
  - *1024* x *768 if the device is landscape*
  - *600* x *1024 if the device is android with smaller screen and is portrait*
  - *1024* x *600 if the device is android with smaller screen and is landscape*
  - *Or 500* x *480*

Note: *AdFalcon support HD banners, where images of higher pixel resolution can be returned for some ad units as below:*

Ad size	Comment
320x50	Returns image of 320x50 pixels or 640x100 pixels.
728x90	Returns image of 728x90 pixels or 1456x180 pixels.
Interstitial_320x480	Portrait: returns image of 320x480 pixels or 640x960 pixels. Landscape: returns image of 480x320 pixels or 960x640 pixels.
Interstitial_768x1024	Portrait: returns image of 768x1024 pixels or 1536x2048 pixels. Landscape: returns image of 1024x768 pixels or 2048x1536 pixels.

In this case the party displaying the ad (Publisher code or third-party SDK) needs to put the returned image in fixed-size frame based on the device screen resolution and density.

- **Language (U_LN)**

  The language of the requested ad in ISO 639-1 language codes format (Two Letters code); e.g. for Arabic language, pass **ar** code for language parameter U_Ln=ar.

- **Age or birthdate (U_AGE or U_BD)**

  You can add one of these two parameters to determine the age of the user.

  In the case you pass a birthdate you must send it in the DD.MM.YYYY format

- **Gender (U_G)**

  This parameter represents the Gender of the user

Gender	Value

Male	m
Female	f

- **Keywords (U_KW)**
  This parameter is used to list a collection of keywords in comma separated format. These keywords can be useful since AdFalcon's ads selector engine will search for ads containing these keywords.

  Note: *The sent keyword needs to be one of the keywords defined on AdFalcon keywords list*.

- **Country Code (U_CC)**
  County code of the end user in ISO 3166-1 alpha-2 format code (two-letter code)

- **Area Code (U_AC)**
  A parameter containing the user's area code

- **Postal Code (U_PC)**
  A parameter containing the user's postal/ZIP code

- **Geolocation (D_LA, D_LO)**
  A parameter containing the geolocation information of the device. The location information is divided into two double values; latitude (D_LA) and longitude (D_LO).

  Example

  D_LA=35.54454548&D_LO=58.981

- **Sub Site ID (R_SSID)**
  This parameter is the unique ID for sub (blind) application/website inside your main application/website.

- **Blackberry Vender ID (D_BBVID)**
  If the requesting device is a blackberry, you will need to pass the vendor ID to help AdFalcon detect the country and operator of the device.

User Identification Parameters

For Mobile Web:

- **User ID (R_UUID)**
  This parameter is used to get the unique ID for the device user. You can get this value in two ways:

  1. If you have your own unique ID for each user you can always pass this ID.
  2. If you do not have a unique ID for each user then you can do the following:
     A – Send the first ad request without R_UUID parameter.
     B – When AdFalcon receive the request without a unique ID, the system will generate a new unique user id and send it back as follows:
     - Set the HTTP header "X-ADFALCON-UUID"
     - Set a persistent cookie
     - Set UUID field in JSON responses.

C – Get the generated user unique id from X-ADFALCON-UUID HTTP header or from the UUID JSON field.
D – Thereafter, pass the user unique id in the R_UUID in all ad requests that are submitted on behalf of the same user.

For Mobile Applications:

iOS Identifier Parameters

Name	Parameter	Hash type	Description
ODIN-1	D_UID_ODIN1	Plain	Raw byte array of 802.11 MAC Address that is hashed using SHA-1
OpenUDID	D_UID_OPENUDID	Plain	As per OpenUDID initiative. Refer to https://github.com/ylechelle/OpenUDID
MAC	D_UID_MD5_MAC	MD5	MD5 of The MAC address represented in human readable format with capital characters such as *1A:2B:3C:4D:5E:6F*
MAC	D_UID_SHA1_MAC	SHA1	SHA1 of the MAC address represented in human readable format with capital characters such as *1A:2B:3C:4D:5E:6F*
Identifier For Advertising	D_UID_IDFA	Plain	The value of advertisingIdentifier property in iOS 6 (or higher). This is sent plain without any hashing.
Advertising Tracking Enabled	D_UID_IDTF	Plain	The value of advertisingTrackingEnabled property in iOS 6 (or higher); indicates whether the user has limited ad tracking. This parameter is required when the device ID parameter D_UID_IDFA is used Values: • 'TRUE' if the device's value for advertisingTrackingEnabled is set to 'True' • 'FALSE' if the device's value for advertisingTrackingEnabled is set to 'False'

Android Identifier Parameters

Name	Parameter	Hash type	Description
Android ID	D_UID_MD5_ANDR	MD5	MD5 of ANDROID_ID value.
Android ID or ODIN-1	D_UID_SHA1_ANDR	SHA1	SHA1 of ANDROID_ID value. Note: when you hash ANDROID_ID using SHA1 that will generate ODIN-1.
MAC	D_UID_MD5_MAC	MD5	MD5 of the MAC address for android device in string format that is used as it's without converting its characters to upper or lower case.

MAC	D_UID_SHA1_MAC	SHA1	SHA1 of the MAC address for android device in string format that is used as it's without converting its characters to upper or lower case.
IMEI	D_UID_MD5_IMEI	MD5	MD5 of Unique number consists of 15-digit number which identifies an individual phone to the network operators.
IMEI	D_UID_SHA1_IMEI	SHA1	SHA1 of Unique number consists of 15-digit number which identifies an individual phone to the network operators.

BlackBerry

Name	Parameter	Hash type	Description
PIN	D_UID_MD5_BBPIN	MD5	MD5 of unique personal identification number (PIN) for each BlackBerry device.
PIN	D_UID_SHA1_BBPIN	SHA1	SHA1 of unique personal identification number (PIN) for each BlackBerry device.

Windows Phone

Name	Parameter	Hash type	Description
Device Unique ID	D_UID_WINID	Plain	The unique hash "per device for Window Phone OS 7" or "per device and per app publisher for Window Phone OS 8".
Device Unique ID Or ODIN1	D_UID_SHA1_WINID	SHA1	SHA1 of UniqueDeviceID property.

Others:

Name	Parameter	Hash type	Description
IMEI	D_UID_MD5_IMEI	MD5	MD5 of IMEI (15-digit number).
IMEI	D_UID_SHA1_IMEI	SHA1	SHA1 of IMEI (15-digit number).

For more information on the Ad Request parameters please refer to Appendix A.

Sample HTTP Get Ad Request

```
http://api.adfalcon.com/AdRequest/GetAd?
R_SID=546454564215374213241534213 54&
R_IP=192.168.2.1&
R_F=XHTML_with_js&
R_V=api-all-2.0.0&
R_AS=1&
R_ADTYPE=b,ph,rm&
```

```
D_RMSupport=m1,m2&
D_Density=2.6&
R_TM=TRUE&
R_UUID=&
U_KW=sport%2C+mobile&
U_LN=ar&
R_SSID=677878778&
R_HH_HOST=94.249.59.107&
R_HH_CONNECTION=keep-alive&
R_HH_CACHE-CONTROL=max-age%3D0&
R_HH_USER-AGENT=
Mozilla%2F5.0+%28Macintosh%3B+Intel+Mac+OS+X+10_6_7%29+AppleWebKit%2F535.1+%28
KHTML%2C+like+Gecko%29+Chrome%2F13.0.782.220+Safari%2F535.1&
R_HH_ACCEPT=
text%2Fhtml%2Capplication%2Fxhtml%2Bxml%2Capplication%2Fxml%3Bq%3D0.9%2C*%2F*
%3Bq%3D0.8&
R_HH_ACCEPT-ENCODING=gzip%2Cdeflate%2Csdch&
R_HH_ACCEPT-LANGUAGE=en-US%2Cen%3Bq%3D0.8&
R_HH_ACCEPT-CHARSET=
ISO-8859-1%2Cutf-8%3Bq%3D0.7%2C*%3Bq%3D0.3&
R_HH_COOKIE=
JSESSIONID%3D8e87c767d2078016a5ad14055f0e%3B+__utma%3D132162694.2044970470.13
09352199.1309352199.1309352199.1%3B+__utmz%3D132162694.1309352199.1.1.utmcsr%3
D%28direct%29%7Cutmccn%3D%28direct%29%7Cutmcmd%3D%28none%29
```

3 Ad Response

ADFaclon's Ad Response format depends on the value passed for the Request Parameter (R_F) describe above. The following formats are currently supported:

- JSON
- XHTML
- Basic HTML

JSON

JSON contains a collection of attributes that hold all the needed information to process an ad on the mobile app or website.

Below table lists all the attributes for the JSON response.

Parameter	Type	Description
-code	String	Gives the status of request. In case of success this attribute is omitted. The possible values for this attribute are: **Value** / **Description** 1 — No Ad Available 2 — Invalid Parameters 3 — Missing Required Parameters -1 — Server internal error
-message	String	Gives more details about the status of request. In case of success this attribute is omitted.
+settings	object	This object is returned when a request has R_STG parameter set to TRUE. This object contains the App/Site settings to override settings set in the code.
-DTM	int	The Disable Test Mode. This parameter is used to enable/disable the test mode for the App/Site. The possible values for this parameter are: **Value** / **Description** -1 — value does not exist 0 — Enable test mode 1 — disable test mode
-EA	int	Enable Autorefresh. This parameter is used to enable/disable the autorefresh for App/Site. The possible values for this parameter are: **Value** / **Description** -1 — value does not exist

		0 Disable autorefresh 1 Enable autorefresh
-RD	int	The Refresh Duration in seconds. This parameter used to set the refresh duration for App/Site.
-uuid	String	AdFalcon Unique User ID; if generated by AdFalcon system.
-responseType	String	Format of the returned Ad response. The possible values for this attribute are: **Value** **Description** slides Ad response is formatted as sequence of slides content Ad response is formatted as html content or script tag url Ad response is formatted as URL
-adType	String	Type of the returned Ad The possible values for this attribute are: **Value** **Description** text Text banner Banner plainhtml Plain Html richmedia Rich Media
-adSize	String	Size of the returned Ad, will be returned in this format [width, height]
+adAction	object	Represents Ad click action “click to action” (URL, SMS … etc.), action url or action info url. ***Note**: This is an optional attribute, yet if it exists then the action url **must** be called when the user click on the Ad*
-type	String	Indicates the action performed upon the user clicks the Ad. The following actions are supported: **Value** **Action** URL click to open website Video click to play video stream Audio click to play audio stream SMS click to send sms Call click to make call Canvas click to expand to a canvas *Note:canvas is a type of action that is similar to a dialog that is divided into two sections:* *1 – Title bar: is a bar that contains the title of the*

		canvas, foreground and background. *2 – Body: is a web view that renders the action_url.*
		App: Click to launch apple store or android market base on the mobile device.
-action_url	String	The url of the target action; being a landing page, audio. When the user click on the Ad, the device should redirect the user to this URL. *Note: Requesting this URL will log a click on the Ad.*

-actionInfo_url	String	When this URL is requested, it provided extra information about the Ad Action "Click to Action". Mainly this is used for cases where extra information is required, such as Phone number to call or send SMS to.
		
		The format of the JSON is:
		{
		"url":"http://…."
		or
		"number":"0096278….."
		}
		Note: Requesting this URL will log a click on the Ad.

+canvas	Object	Canvas is an object that is returned when an action type is canvas. It included all the information needed to draw the canvas. canvas is divided into two sections: 1 – Title bar: is a bar that contains the title of the canvas, foreground and background. As illustrated below. 2 – Body: is a web view that renders the image/page specified in the action_url field.
-sz	array	Size of canvas that contains an array and contains one of two possible values: [width, height]
-tx	String	Text of the canvas's title bar.
-bc	array	Background of canvas's title bar. The possible values for this parameter are: red, green, blue, alpha]
-fc	array	Foreground of the canvas's title. The possible values for this parameter are: [red, green, blue, alpha]
-beacon_url	String	This attribute represents a url for an image of size 1x1 pixel. , This is used to indicate the Ad unit has been displayed on the device. ***Note**: This is an optional attribute, yet if it exists then it **must** be requested directly after the Ad is successfully loaded, so an impression will be counted.*

<table>
<tr><td>-content</td><td>String</td><td>Contains plain html or script tag of the returned Ad.

Note: This attribute exists just when the ad response is formatted as content, otherwise it will be omitted</td></tr>
<tr><td>-url</td><td>String</td><td>Contains url of the returned Ad.

Note: This attribute exists just when the ad response is formatted as url, otherwise it will be omitted</td></tr>
<tr><td>+slides</td><td>Array of slides</td><td>Contains an array of slides where each slide contains its display duration and elements (image, text and background).

Note: This attribute exists just when the ad response is formatted as slides, otherwise it will be omitted</td></tr>
<tr><td>-dd</td><td>int</td><td>Display duration of the slide i.e. each slide has a specific time in seconds to remain displayed on screen.
The possible values for this parameter are:

<table><tr><th>Value</th><th>Description</th></tr><tr><td><= 0</td><td>If the value is less than or equal to zero then this means that no duration is determined and so the slide will remain displayed and following slides will not be displayed.
This is normal used if the Ad consists of one slide only or when the slide is the last slide in the Ad.</td></tr><tr><td>> 0</td><td>If the value is greater than zero the slide will be displayed for the duration of the value in seconds, and then next slide will be displayed.</td></tr></table></td></tr>
<tr><td>+elements</td><td>Array of elements</td><td>An Array of elements where each element represents an image, text or background. You must draw the elements as per the order and specifications supplied.
The possible values for this Array depending on the type of ad are:

<table><tr><th>Type</th><th>Parameters</th><th>Description</th></tr><tr><td>Image</td><td>t:i
p:
[x-axis ,y-axis, width, height]
url:http://…</td><td>Indicates an Image Element.
Possible images are logo, action icon and banner.

To draw the image perform the following:
1 – Download an image from a url.
2 – Draw the image at the given position.</td></tr><tr><td>Text</td><td>t:t
p:</td><td>Indicates a Text Element.
Possible text elements are Text</td></tr></table></td></tr>
</table>

			[x-axis ,y-axis, width, height] tx:Ad text fn:font name fz:font size fs:font style al:align	ad, AdFalcon logo and alternative text for the banner. To draw the text perform the following: 1 – Create a font that has a font name, size and style (plain, bold and italic) using the parameters fn, fz and fs. 2 – draw the text at given position and align it.
		Background	t:bg p: [x-axis ,y-axis, width, height] bc:[red,green, blue,alpha] c:[red,green, blue,alpha]	Indicated a Background Element. To draw the text perform the following: 1 – Normal - Fill the rectangle using the values in the c parameter which represents color. - Draw rectangle at given position. 2 – Gradient - Fill the gradient of the rectangle using values of the bc parameter and the using the values of the c parameter. - Draw rectangle at the specified position.

-t	char(1,2)	Type of element. The possible values for this parameter are: **Value** **Description** bg background element i image element t text element
-p	array	Position of element [x-axis ,y-axis, width, height]
-fn	String	Text font name such as Arial, Tahoma …etc.
-fs	char	Style of text. The possible values for this parameter are: **Value** **Description** n Normal or plain i Italic b bold
-fz	int	Text font size

-al	char(3)	Text alignment. The possible values for this parameter are: **Value** **Description** ltr left to right rtl right to left ctr center
-tx	String(40)	Text
-url	String	Image url
-bc	Array	bc is array of numbers that holds rgba color in order as the following format [red, green, blue, alpha]. note: red, green and blue are integer have the range (0 – 255) alpha is double has the range (0.0 – 1.0). this parameter used to represent top gradient color
-c	Array	c is array of numbers that holds rgba color in order as the following format [red, green, blue, alpha]. note: red, green and blue are integer have the range (0 – 255) alpha is double has the range (0.0 – 1.0). this parameter used to represent bottom gradient color or normal color

In-line Ad Response

Text Ad

Text Ad responses are always of “slides” type. Below is a sample Text Ad response:

```
{
        "responseType":"slides",
        "adSize":"[320,50]",
        "adType":"text"
        "adAction":{
                        "type":"url",
                        "action_url" : "http://api.adfalcon.com/C/x/xxxxx/xxxx/x",
                        "actionInfo_url" : "http://api.adfalcon.com/CI/x/xxx/xx/x",
                },
        "beacon_url" : "http://api.AdFalcon.com/B/x/xxxxx/xxxx/x”,
        "slides":[{

                "dd":0,
                "elements" : [{

                        "t" : "bg",
                        "p" : [0, 0, 320, 48],
                        "bc": [95,86,246,1],
                        "c": [194,215,96,1]
                },{

                        "t" : "t",
                        "p" : [53, 5, 219, 30],
                        "fn" : "Arial",
                        "fc" : [68,112,85,1],
                        "fs" : "b",
                        "fz" : 12,
                        "al" : "ctr",
```

```
                        "tx": ”Ad Text”
                }]}
        ]
}
```

Static Banner

Banner Ad responses are always of “slides” type. Below is a sample Banner Ad response:

```
{
        "responseType":"slides",
        "adSize":"[320,50]",
        "adType":"banner"
        "adAction":{
                        "type":"url",
                        "action_url" : "http://api.adfalcon.com/C/x/xxxxx/xxxx/x",
                        "actionInfo_url" : "http://api.adfalcon.com/CI/x/xxx/xx/x",
                },
        "beacon_url" : "http://api.AdFalcon.com/B/x/xxxxx/xxxx/x”,
        "slides":[{

                "dd":0,
                "elements" : [{

                        "t" : "bg",
                        "p" : [0, 0, 320, 48],
                        "bc": [95,86,246,1],
                        "c": [194,215,96,1]
                },{

                        "t" : "t",
                        "p" : [53, 5, 219, 30],
                        "fn" : "Arial",
                        "fc" : [68,112,85,1],
                        "fs" : "b",
                        "fz" : 12,
                        "al" : "ctr",
                        "tx": ”alternative text”
                },{

                        "t" : "i",
                        "p" : [0, 0, 320, 48],
                        "url" : "http://image.adfalcom.com/234/2313/123232234”

                }]}
        ]
}
```

Plain HTML

If you request an ad with plain html ad type, the server will return the ad in “content” response type, this type only contains HTML tags without any JavaScript code as the sample below:

```
{
        "responseType":"content",
        "adSize":"[320,50]",
        "adType":”plainhtml”
        "content" : "<a href=’ http://www.adflacon.com’><img src=’http://xxxxx’
        /></a>"
}
```

Note: *In case of in-app ad, the ad container should intercept the click action and open the action url in a web browser.*

Rich Media

Rich Media Ad responses are always of "content" response type. Below is a sample Rich Media Ad response

Sample of regular Rich Media

```
{
        "responseType":"content",
        "adSize":"[320,50]",
        "adType":"richmedia"
        "content" : "<script type=\"text/javascript\"
        src=\"http://www.adfalcon.com/static/js/adfalcon-web-all-
        1.0.0.js\"></script><script type=\"text/javascript\">     var
        adFalconInstance1 = new adFalcon(\"adFalconID1\", adFalconParameters );
        adFalconInstance1.loadAd();</script>"

}
```

Sample of MRAID content

```
{
        "responseType":"content",
        "adSize":"[320,50]",
        "adType":"richmedia"
        "content" : "<script src="mraid.js"></script><script
        type=\"text/javascript\" src=\"http://www.adfalcon.com/static/js/adfalcon-
        web-all-1.0.0.js\"></script><script type=\"text/javascript\">     var
        adFalconInstance1 = new adFalcon(\"adFalconID1\", adFalconParameters );
        adFalconInstance1.loadAd();</script>"

}
```

Note: *If MRAID is supported and specified in the Ad Request, then always display the Rich Media response in a an MRAID compatible container.*

Interstitial

Interstitial is a full screen ad that is requested by setting Ad Size parameter in the Ad Request to one of the following values:

- interstitial_320x480
- interstitial_1024x768
- Interstitial_Auto

Interstitial Ad Response comes in one of the following types:

- Static Interstitial
- URL
- Content

The sections below provides more details about each of the interstitial types.

Static Interstitial Ad

Static Interstitial is mainly an image that is displayed in full screen. The Ad Response will be similar to Banner Ad responses which consists of Banner Image URL, Action URL and Beacon URL. When displaying static interstitial please note the following:

- The response's ad size will be set to the size of the image
- The image needs to be displayed centralized in a full-screen modal view
- A close button needs to be presented to allow dismissing the Ad
- request the beacon url image
- Upon clicking the image, redirect the user to the action url

Sample Static Interstitial Ad

```
{
        "responseType":"slides",
        "adSize":"[300,250]",
        "adType":"banner"
        "adAction":{
                        "type":"url",
                        "action_url" : "http://api.adfalcon.com/C/x/xxxxx/xxxx/x",
                        "actionInfo_url" : "http://api.adfalcon.com/CI/x/xxx/xx/x",
                },
        "beacon_url" : "http://api.AdFalcon.com/B/x/xxxxx/xxxx/x",
        "slides":[{

                "dd":0,
                "elements" : [
                        {
                                "t" : "i",
                                "p" : [0, 0, 300, 250],
                                "url" : "http://image.adfalcom.com/static/png/1232"

                }]}
        ]
}
```

Dynamic Interstitial Ad represented by URL

This interstitial Ad is simply a URL pointing to a full-screen web page ad. When displaying this types of ads please note the following:

- The URL needs to be presented in a full screen web view.
- A close button needs to be presented to allow dismissing the Ad.
- If beacon URL is returned in the ad response, then ensure the beacon url image is requested.
- This ad response type will not include an action url field.

Sample URL:

```
{
        "responseType":"url",
        "adSize":"[480,320]",
        "adType":"richmedia"
        "url" : "http://www.adfalcon.com/interstitial/url-ads-1/1 "
}
```

Note: *If MRAID is supported and specified in the Ad Request, then always display the Rich Media response in an MRAID compatible container.*

Dynamic Interstitial Ad represented by content script

This interstitial type is presented in "content" ad response type, and it is made of JavaScript code. When displaying this types of ads please note the following:

- In case of in-app ad, the interstitial ad needs to be presented in a full screen web view and the ad container should provide a close button to dismiss the ad unless MRAID is supported in which case the close button is handled as per MRAID specifications.
- In case of Web Ad, the interstitial ad will render itself
- If beacon URL is returned in the ad response, then ensure the beacon url image is requested.
- This ad response type will not include an action url field.

Sample of Rich media interstitial

```
{
        "responseType":"content",
        "adSize":"[320,480]",
        "adType":"richmedia"
        "content" : "<script type=\"text/javascript\"
        src=\"http://www.adfalcon.com/static/js/adfalcon-web-all-
        1.0.0.js\"></script><script type=\"text/javascript\">     var
        adFalconInstance1 = new adFalcon(\"adFalconID1\", adFalconParameters );
        adFalconInstance1.loadAd();</script>"

}
```

Sample of MRAID interstitial

```
{
        "responseType":"content",
        "adSize":"[320,50]",
        "adType":"richmedia"
        "content" : " <script type="text/javascript"
        src="mraid.js"></script><script type=\"text/javascript\"
        src=\"http://www.adfalcon.com/static/js/adfalcon-web-all-
        1.0.0.js\"></script><script type=\"text/javascript\">     var
        adFalconInstance1 = new adFalcon(\"adFalconID1\", adFalconParameters );
        adFalconInstance1.loadAd();</script>"

}
```

Note: *If MRAID is supported and specified in the Ad Request, then always display the Rich Media response in a an MRAID compatible container*.

XHTML and BASIC_HTML

The XHTML and BASIC_HTML Response is very useful because you will be able to display the XHTML Ad Response in a web view where it renders XHTML directly without needing to parse the response.

The following HTTP Headers are returned as part of the XHTML and BASIC_HTML responses:

HTTP Header Name	Value
X-ADFALCON-ERROR-CODE	Error Code Value: 1 — No Ad Available Value: 2 — Invalid Parameters Value: 3 — Missing Required Parameters Value: -1 — Server internal error
X-ADFALCON-ERROR-MESSAGE	Message of the error if any.
X-ADFALCON-UUID	Unique Id of the user.

Sample Ad Responses

BASIC_HTML

- Banner

```
< a href = "http:\\..." >< img src = "http://img" width = "320" height = "50" />
< /a >
< img src = "beacon url" alt = "" width = "1" height = "1"/ >
```

- Text

```
< a href = "http:\\..." > Ad here < /a >
< img src = "beacon url" alt = "" width = "1" height = "1"/ >
```

XHTML

```
<script type ="text/javascript" src ="http://www.adfalcon.com/static/js/adfalcon-web-all-1.0.0.js" ></script >
<script type ="text/javascript" >

var adFalconParameters12345678 =
{
   R_SID: ”xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx"
   , R_TM: true
   , R_AS:1

}

   var adFalconInstance123456478=
   new adFalcon("adFalconInstance123456478", adFalconParameters12345678);
   adFalconInstance123456478.loadAd();
</script>
```

4 Appendix A: AdFalcon Parameters Reference

Parameter	Name	Type	Is Required?	Example	Description
R_SID	Site ID	String	YES	R_SID=xxxxx	Publisher ID
R_F	Format	String	YES	R_F=JSON	Ad Response Format
R_IP	IP Address	String	YES	R_IP=94.249.59.100	Mobile Device IP
R_AS	Ad Unit Size	int	NO	R_AS=1	Ad Unit Sizes
R_V	Version	String	YES	R_V= api-all-1.0.0	AdFalcon API Version
D_UA	User agent	String	YES	D_UA= Mozilla/5.0 (iPhone; U; CPU like Mac OS X; en) AppleWebKit/ 420+ (KHTML, like Gecko) Version/3.0 ...	User-Agent
D_BBVID	Blackberry vender ID	String	YES (Blackberry)	D_BBVID=100	Blackberry Vender ID
R_UUID	User ID	String	NO	R_UUID=645351321	User ID
R_HH_HEADERNAME	HTTP Headers	String	YES (WEB)	R_HH_ACCEPT= text/plain&…	Source HTTP Header
U_LN	Language	Char(2)	NO	en	This is ISO 639-1 codes language code
U_PC	Postal Code	int	NO	962	User postal code
U_AC	Area Code	int	NO	11121	User area Code
U_AGE	AGE	int	NO	27	User age
U_KW	Keywords	String	NO	sport, football, technologies	Search on ad which related to this keywords
U_G	Gender	char(1)	NO	1	m male|f female
U_CC	Country Code	char(2)	NO	JO	This is ISO 3166-1 alpha-2 country code.
U_BD	Birthdate	String	NO	21.11.1984	dd.MM.yyyy
D_LA & D_LO	geo	double,	NO	D_LA=35.154	user geolocation

	location latitude and longitude	double		& D_LO=35.484	
D_DO	Device orientation	char(1)	NO	D_DO=p	Landscape : l Portrait : p
D_SW	Device screen width	float	NO	D_SW=320	In Pixel
D_SH	Device screen height	float	NO	D_SH=480	In Pixel
D_Density	Screen's Density	float	NO	D_Density=2.6	The quantity of pixels within a physical area of the screen, usually referred to as dpi (dots per inch)
D_SS	Sound status	char(1)	NO	D_SS=s	Silent: s Normal: n
D_DM	Device manufacturer	String	NO	D_DM=Apple	
D_DMdl	Device model	String	NO	D_DMdl=iPhone	
D_OS	OS name	String	NO	D_OS=android	
D_OSV	OS version	String	NO	D_OSV=iOS4.3	
R_AdType	Ad type	String	NO	D_AdType=t, b	Banner: b Text: t Plain Html:ph Rich Media:rm
R_TM	Test Mode	Boolean	NO	R_TM=false	true| false
D_RAM_FSZ	Ram free size	double	NO	D_RAM_FSZ=832545444	
D_RAM_SZ	Ram size	double	NO	R_RAM_SZ=24232312354	
D_RAM_USZ	Ram user size	double	NO	R_RAM_SZ=232323232454	
D_CPU_FQ	cpu frequency	double	NO	D_CPU_FQ=1000000	
D_CON_TYPE	network type	String	NO	D_CON_TYPE=WIFI	WIFI, CARRIER
R_STG	application site settings	Boolean	NO	R_STG=true	If the value of this parameter is true, AdFalcon network

					will return a JSON that has the site settings. These settings are: 1 – Disable test mode 2 – Enable auto refresh 3 – Refresh duration
R_STYLE	Text ad style	Boolean	NO	R_STYLE=false	If the value of this parameter is false you will only receive a plain text ad that does not have any decoration like bg color, font or size
R_SSID	Sub Site ID	String	NO	R_SSID=xxxxx	Sub Site ID.
R_URL	URL	String	YES in case of Web Traffic. In case if in-app ads it should be omitted.	R_URL=xxxxx	URL of the page that is originating the ad request.
D_RMSupport	Rich Media Supported Protocol	String (Comma Separated Values)	NO	D_RMSupport=m1, m2	MRAID1: m1 MRAID2: m2
Unique User Identification : below are the accepted user ID types (at least one of them must be sent in case of APP)					
R_UUID	User ID	String	NO	R_UUID=645351321	User ID
D_UID_ODIN1	ODIN-1	String	NO	D_UID_ODIN1=xxxxx	ODIN-1
D_UID_OPENUDID	OpenUDID	String	NO	D_UID_OpenUDID=xxxxx	OpenUDID
D_UID_IDFA	Identifier For Advertising	String	NO	D_UID_IFA=xxxx	The value of advertisingIdentifier property in iOS 6 (or higher). This is sent plain without any hashing.
D_UID_IDTF	Advertising Tracking Enabled	String	Yes only if D_UID_IDFA is provided	D_UID_IDTF	The value of advertisingTrackingEnabled property in iOS 6 (or higher);

					indicates whether the user has limited ad tracking. This parameter is required when the device ID parameter D_UID_IDFA is used Values: • 'TRUE' if the device's value for advertisingTrackingEnabled is set to 'True' 'FALSE' if the device's value for advertisingTrackingEnabled is set to 'False'
D_UID_MD5_ANDR	Android ID hashed with MD5	String	NO	D_UID_MD5_ANDR=xxxxx	Android ID hashed with MD5
D_UID_SHA1_ANDR	Android ID hashed with SHA1	String	NO	D_UID_SHA1_ANDR=xxxxx	Android ID hashed with SHA1
D_UID_MD5_IMEI	IMEI hashed with MD5	String	NO	D_UID_MD5_IMEI=xxxxx	IMEI hashed with MD5
D_UID_SHA1_IMEI	IMEI hashed with SHA1	String	NO	D_UID_SHA1_IMEI=xxxxx	IMEI hashed with SHA1
D_UID_MD5_MAC	Mac Address hashed with MD5	String	NO	D_UID_MD5_MAC=xxxxx	Mac Address hashed with MD5
D_UID_SHA1_MAC	Mac Address hashed with SHA1	String	NO	D_UID_SHA1_MAC=xxxxx	Mac Address hashed with SHA1
D_UID_MD5_BBPIN	Blackberry PIN hashed with MD5	String	NO	D_UID_MD5_BBPIN=xxxxx	Blackberry PIN hashed with MD5
D_UID_SHA1_BBPIN	Blackberry PIN hashed with SHA1	String	NO	D_UID_SHA1_BBPIN=xxxxx	Blackberry PIN hashed with SHA1
D_UID_WINID	Windows Phone Device	String	NO	D_UID_WINID=xxxxx	Windows Phone Device Unique ID

	Unique ID				
D_UID_SHA1_WINID	Windows Phone Device Unique ID hashed with SHA1	String	NO	D_UID_SHA1_WINID =xxxxx	Windows Phone Device Unique ID hashed with SHA1