AdFalcon Server API 3.0 Integration Developer's Guide

AdFalcon Mobile Ad Network

Product of

Noqoush Mobile Media Group

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1 Overview

AdFalcon Server API makes it easier for ad networks and supply partners to integrate with AdFalcon without using SDK libraries. This document aims to provide developers with instructions and guidance on how to integrate with AdFalcon Server using server-side intergration.

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 Required 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 four 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.
VAST2	Xml format for in-stream

- **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 location and connection details 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-3.0.0**

Mobile Web Required 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=Mozilla…etc.

Optional Parameters

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

Common Optional Parameters

- **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
Native	n
In-stream Video	v

  Note: *If this parameter is not specified, AdFalcon assumes the client supports all types except native and in-stream video ads, 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.*

  Note:
  - *Native and in-stream video ads are returned only when it is requested explicitly as the only ad type.*
  - *Native ads are returned in Json format only, and it is not supported with other formats*
  - *In-stream video ads are returned in VAST 2.0 format only, and it is not supported with other formats*

- **Supported Capabilities (D_CAPS)**

  This parameter is used to list the supported capabilities in comma separated format. The following table shows the list of supported values:

Supported Capability	Value
MRAID1	mraid1
MRAID2	mraid2
Inline Video	inlinevideo
Auto Play	autoplay

- **Ad Unit size (R_AS)**

  This parameter identifies the requested ad unit size that should be returned. 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 need to specify one of the interstitial ad unit sizes: Interstitial_320x480, Interstitial_1024x768 or Interstitial_Auto.*

Note: *If 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 interstitial 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 interstitial ad for tablets (*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)

- **Region Code (U_RC)**
  Region code of the end user in ISO 3166-2 format 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

- **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.

- **App Bundle (R_APPBBUNDLE)**
  The Bundle/Package Name of the app initiating the Ad Request(App Only).

- **App Name (R_APPNAME)**
  The name of the app initiating the Ad Request (App Only).

- **App Version (R_APPVER)**
  The version of app initiating the Ad Request (App Only).

Sub App/Site Parameters

When the same AdFalcon App/Site ID is used to traffic multiple mobile apps and sites, the Sub App/Site parameters are used to pass the details of the actual app/site initiaiting the ad request.

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

- **App/Site Name (R_SSName)**
  This parameter is the name of the app/website initiating the ad request.

- **App/Site Url (R_SSUrl)**
  This parameter is the web site url or the store/market url of the app initiaiting the ad request.

- **App/Site Market Id (R_SSMID)**
  This parameter is the Bundle ID/Package Name of the app initiating the Ad Request.

In-stream Video Ads parameters:

- **Supported Video Types (R_VT)**
  This parameter is used to specify the supported video types in comma separated format. The video type should be sent in mime format (ex. video/mp4))

  Note: *Currently only MP4 video format is supported.*

  Note*: this parameter value should be URL encoded because of the "/" character.*

- **Supported Video Delivery Methods (R_VDM)**
  This parameter is used to specify the supported video delivery methods in comma separated format.

  The following table shows the list of supported values:

Delivery Method	Value	Comment
Streaming	1	Not currently supported
Progressive	2	

- **Video Min Duration (R_VMinD)**

This parameter is used to specify the minimum supported video duration in seconds.

- **Video Max Duration (R_VMaxD)**
  This parameter is used to specify the maximum supported video duration in seconds.

  Note: *Supported video durations are:*

  - *15 seconds*
  - *30 second*

- **Video Width (R_VW)**
  This parameter is used to specify the required video width in pixels

- **Video Height (R_VH)**
  This parameter is used to specify the required video height in pixels.

  Note: *Supported video resolutions are:*

  - *640X360 (16:9)*
  - *480X360 (4:3)*

- **Video Min Bitrate (R_VMinBR)**
  This parameter is used to specify the minimum supported video bitrate.

- **Video Max Bitrate (R_VMaxBR)**
  This parameter is used to specify the maximum supported video bitrate.

Native Ad parameters:

- **Native Ad Assets (R_NASSETS)**

  This parameter is used to specify the supported native Ad's assets in comma separated values. The following table shows the list of supported values:

ID	Description
title	Title Asset of the native ad
icon	Icon asset of the native ad
image	Main asset of the native ad of type Image
video	Main asset of the native ad of type Video
xhtml	Main asset of the native ad of type Xhtml
d.X	Data Asset of the native ad. X is the ID of the data asset type. ***Refer to 5*** Appendix B: Native Ad Data Asset Types for list of all supported values. Most common dat assets are: • d.2: Description text the product • d.3: Rating of the product • d.12: Click-through Action Text such as Open, Install..etc

  This is a mandatory parameter, it specifies what assets are supported by the app/site. Asset-specific parameters will be ignored if the asset is not included here.

Native Ad Title Parameters

- **Is Native Ad Title Mandatory (R_NTRF)**

  This Boolean parameter (true/false) is considered if the title asset is included in the Native Ad Assets (R_NASSETS) parameter to specify whether the title asset is mandatory. Defaults to false.

- **Native Ad Title Max Length (R_NTML)**

  This parameter is used to specify the maximum supported length of the native ad title.

Native Ad Icon Parameters

- **Is Native Ad Icon Mandatory (R_NIRF)**

  This Boolean parameter (true/false) is considered if the icon asset is included in the Native Ad Assets (R_NASSETS) parameter to specify whether the icon asset is mandatory. Defaults to false.

- **Native Ad Icon Width (R_NIW)**

  This parameter is used to specify the width of the native ad icon in pixels

- **Native Ad Icon Height (R_NIH)**
  This parameter is used to specify the height of the native ad icon in pixels

- **Is Larger Native Ad Icon Allowed (R_NILA)**
  This Boolean parameter (ture/false) is used to specify if it is allowed to return a native ad icon that is larger than the requested size (R_NIW and R_NIH), otherwise only an icon of the exact width and height can be returned. Defaults to true.

  Note: *It is highly recommended to keep this flag set to true (allow larger icons); disallowing larger icons (setting to false) will highly limit the available demand.*

- **Native Ad Icon MIME Type (R_NIMime)**
  This parameter is used to specify the type of the native ad icon image in mime format. The following table shows the list of supported values:

Value	Description
Image/jpeg	JPEG image format
image/jpg	JPEG image format
Image/png	PNG image format

  Note: *this parameter value should be URL encoded because of the "/"*character

Native Ad Image Parameters

- **Is Native Ad Image Mandatory (R_NMRF)**
  This Boolean parameter (true/false) is considered if the main image asset is included in the Native Ad Assets (R_NASSETS) parameter to specify whether the image asset is mandatory. Defaults to false.

  Note: *This parameter will be ignored if One Main Asset Required Flag (R_NMASSRF) is set.*

- **Native Ad Image Width (R_NMW)**
  This parameter is used to specify the width of the native ad main image in pixels.

- **Native Ad Image Height (R_NMH)**
  This parameter is used to specify the height of the native ad main image in pixels.

- **Is Larger Native Ad Image Allowed (R_NMLA)**
  This Boolean parameter (true/false) is used to specify if it is allowed to return a native ad main image that is larger than the requested size (R_NMW and R_NMH). Defaults to true.

  Note: *It is highly recommended to keep this flag set to true (allow larger images); disallowing larger images (setting to false) will highly limit the available demand.*

- **Native Ad Image MIME Type (R_NMMime)**

  This parameter is used to specify the type of the native ad main image in mime format. The following table shows the list of supported values:

Value	Description
Image/jpeg	JPEG image format
image/jpg	JPEG image format
Image/png	PNG image format

  Note: *this parameter value should be URL encoded because of the "/" character.*

- **One Main Asset Required Flag (R_NMASSRF)**

  If multiple native ad main assets (Image, Video , HTML) are requested in Native Ad Assets (R_NASSETS) parameter, then this parameter can be used to indicate that only one of them is required; i.e. a native ad that includes any one of them can be returned.

  The following table shows the list of supported values:

Value	Description	Notes
0	Unspecified (Not Set)	The Is Required Flag of each of the requested native ad main assets (Image, Video , HTML) is considered
1	Optional	The Is Required Flag of each of the requested native ad main assets (Image, Video , HTML) is ignored and all requested native ad main assets are considered optional.
2	One Asset Mandatory	The Is Required Flag of each of the requested native ad main assets (Image, Video , HTML) is ignored and at least one of the requested native ad assets should exist.

  Note: *This parameter can be omitted if only one main asset is specified in requested in Native Ad Assets (R_NASSETS) parameter.*

Native Ad Data Parameters

- **Is Native Ad Description Mandatory (R_ND2RF)**

  This Boolean parameter (true/false) is used to specify if the native ad description is mandatory. Defaults to false.

- **Native Ad Description Max Length (R_ND2ML)**

  This parameter is used to specify the maximum supported length of the native ad description

- **Is Native Ad Action Text Mandatory (R_ND12RF)**
  This Boolean parameter (true/false) is used to specify if the native ad action text is mandatory. Defaults to false.

- **Native Ad Action Text Max Length (R_ND12ML)**
  This parameter is used to specify the maximum supported length of the native ad action text

- **Is Native Ad Star Rating Mandatory (R_ND3RF)**
  This Boolean parameter (true/false) is used to specify if the native ad rating is mandatory. Defaults to false.

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	iOS 6+: The value of `advertisingIdentifier` property. This is sent plain without any hashing.

Advertising Tracking Enabled	D_UID_IDTF	Plain	iOS 6+: The value of `advertisingTrackingEnabled` property; 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.
Identifier For Advertising	D_UID_IDFA	Plain	Google Play services 4.0+: The value of the Android advertising ID. This is sent plain without any hashing
Advertising Tracking Enabled	D_UID_IDTF	Plain	Google Play services 4.0+: The value of ad tracking preference; 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 `isLimitAdTrackingEnabled` is set to 'False' ▪ 'FALSE' if the device's value for `isLimitAdTrackingEnabled`

	is set to 'True'

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=5464545642153742132415342135 4&
R_IP=192.168.2.1&
R_F=json&
R_V=api-all-3.0.0&
R_AS=1&
R_ADTYPE=b,ph,rm&
D_CAPS=mraid1,mraid2&
D_Density=2.6&
R_TM=TRUE&
D_UID_IDFA =3345545544&
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
- VAST2

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 of 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.
-EA	int	Enable Autorefresh. This parameter is used to enable/disable the autorefresh for App/Site. The possible values of 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 of 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 native Ad response is formatted as native ad
-adType	String	Type of the returned Ad The possible values of this attribute are: **Value** **Description** text Text banner Banner plainhtml Plain Html richmedia Rich Media native Native Ad
-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 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:** This will be filled just when the the Response type is Slides or Native.* ***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.

-trackers	Array of string	Array of click tracking URLs to be fired on click on the ad, expected to return a 1x1 image or 204 response - typically only passed when using 3rd party trackers.
-beacons	Array of String	Array of impression tracking URLs, expected to return a 1x1 image or 204 response – typically will contain at least one impression tracker in addition to any 3rd party impression trackers if available. ***Note**: This is an optional attribute, yet if it exists then the contained urls **must** be requested directly after the Ad is successfully loaded and displayed on the device, so an impression is successfully tracked.*
-content	String	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*
-url	String	Contains url of the returned Ad. ***Note**: This attribute exists just when the ad response is formatted as url, otherwise it will be omitted*
+slides	Array of slides	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*
-dd	int	Display duration of the slide i.e. each slide has a specific time in seconds to remain displayed on screen. The possible values of this parameter are: **Value** — **Description** <= 0 — 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. > 0 — 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.
+elements	Array of	An Array of elements where each element represents an image,

elements — text or background. You must draw the elements as per the order and specifications supplied.
The possible values of this Array depending on the ad type are:

Type	Parameters	Description
Image	t:i p: [x-axis ,y-axis, width, height] url:http://…	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.
Text	t:t p: [x-axis ,y-axis, width, height] tx:Ad text fn:font name fz:font size fs:font style al:align	Indicates a Text Element. Possible text elements are Text 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 of 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 of 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
+native	object	native is an object that is returned when the ad type is native. It includes native ad details
+assets	Array of Assets	Array of native ad assets. Below are the asset types: - Title - Image - Video - Xhtml

- Data

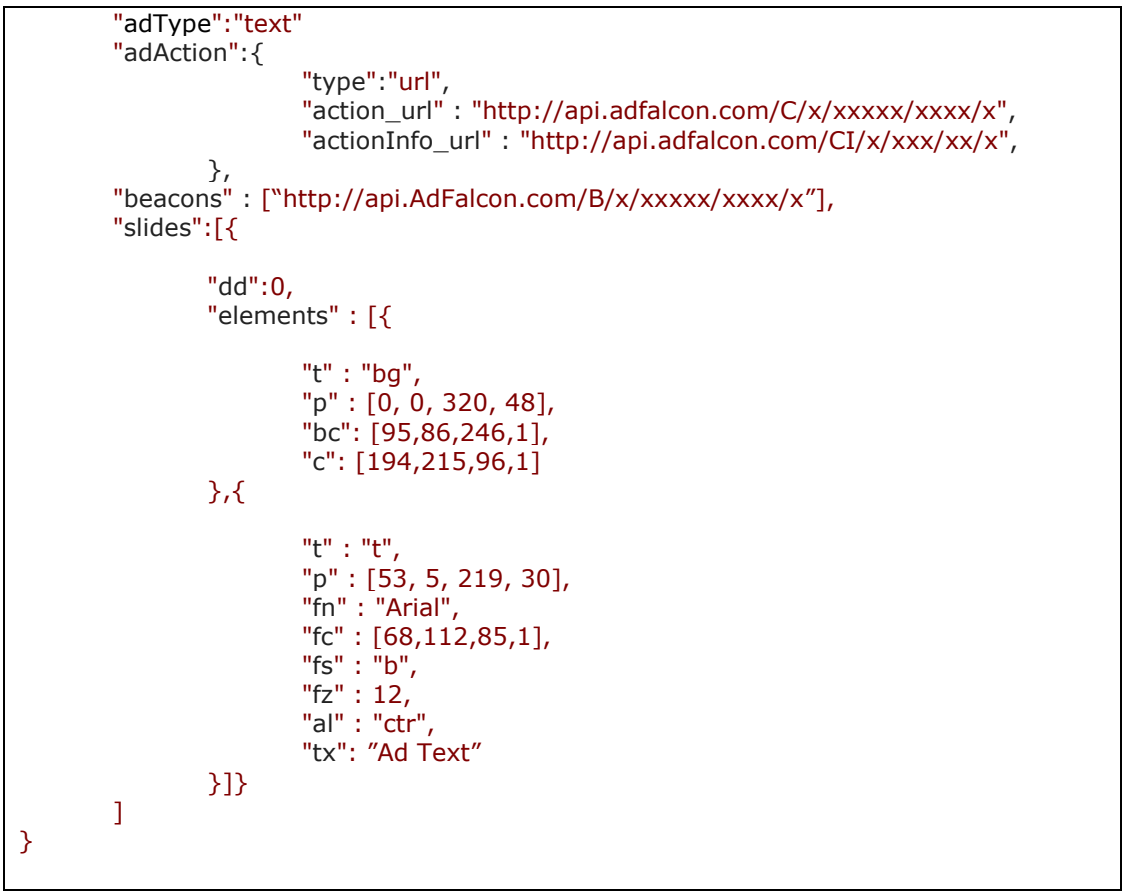
-required	Boolean	Indicates whether the asset is required to be displayed. Default value is 0.
+title	Object	Title object for title asset
-text	string	The text of the native ad title
+img	object	Image object for the image asset
-type	int	Type of the image asset. Below are the bossible types **Value** **Description** 1 Icon 2 Main image
-url	string	url of the native ad image
-w	int	Width of the native ad image in pixels
-h	int	Height of the native ad image in pixels
+video	object	Object of the video asset
-vasttag	string	VAST XML
+xhtml	object	Object of the XHTML asset
-type	int	Type of the xhtml asset. Below are the bossible types **Name** **Description** XHTML XHTML content that includes JavaScript MRAID MRAID Rich Media JavaScript
-content	string	The asset content
+data	object	Data object for description, prices…etc.
-type	int	Type of the data asset. Refer to Appendix B: Native Ad Data Asset Types for the list of possible values.
-value	string	The data asset value. unformatted string such as “5” stars or “10.2“ $ price.
+app_install_extra	Object	app_install_extra is an object that is optionally returned when the action type is app. It includes extra information for app
-app_url	String	The URL scheme to launch the app on the device
-show_if_installed	Boolean	If set to false, then the ad will be hidden if the app (defined by app_url) is already installed on the client. Otherwise the client will show the ad.

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",
                },
        "beacons" : ["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",
                },
        "beacons" : ["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

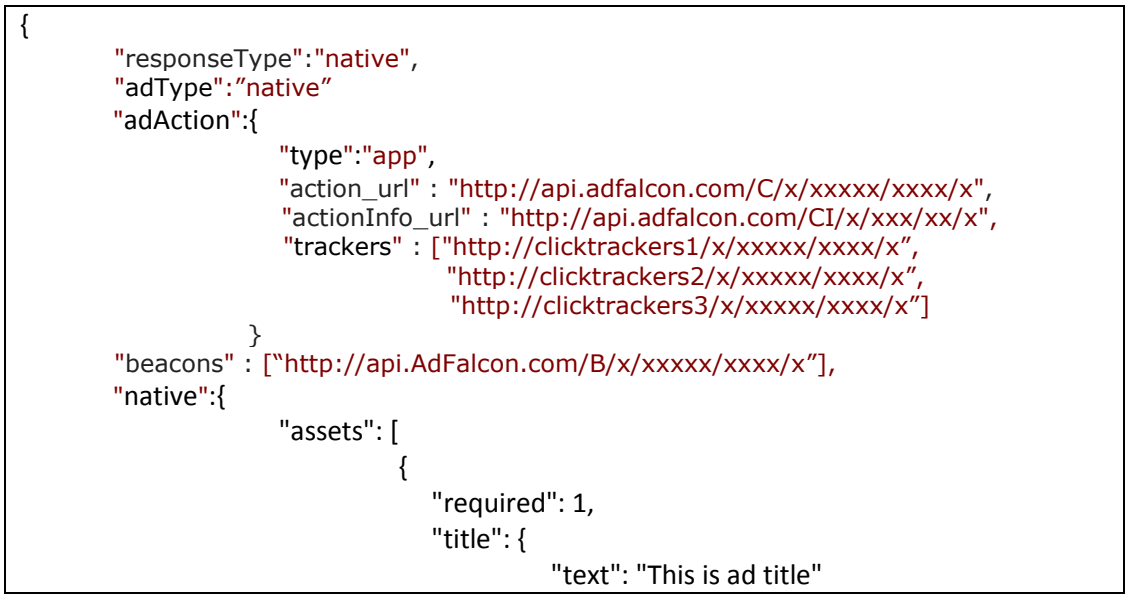
If you request an ad with plain html ad type, the server will return the ad in “content” response type, this type only contains HTML tags without any JavaScript code as the sample below:

```
{
        "responseType":"content",
        "adSize":"[728,90]",
        "adType":”plainhtml”,
        "adAction":{
                    "trackers" : ["http://clicktrackers1/x/xxxxx/xxxx/x”,
                                  "http://clicktrackers2/x/xxxxx/xxxx/x”,
                                  "http://clicktrackers3/x/xxxxx/xxxx/x”]
                },
        "beacons" : [“http://impressiontracker/x/xxxxx/xxxx/x”],
        "content" : "<a  href="http://api.adfalcon.com/C/xxxxxxxxxxxxx"
        target='_blank'><img src="http://xxxxxx/xxx.jpg" width="728"
        height="90"/></a><img src="http://api.adfalcon.com/B/xxxxxxxxxxxxxx"
        alt="" width="1" height="1" style="position:absolute; visibility:hidden"/>"
}
```

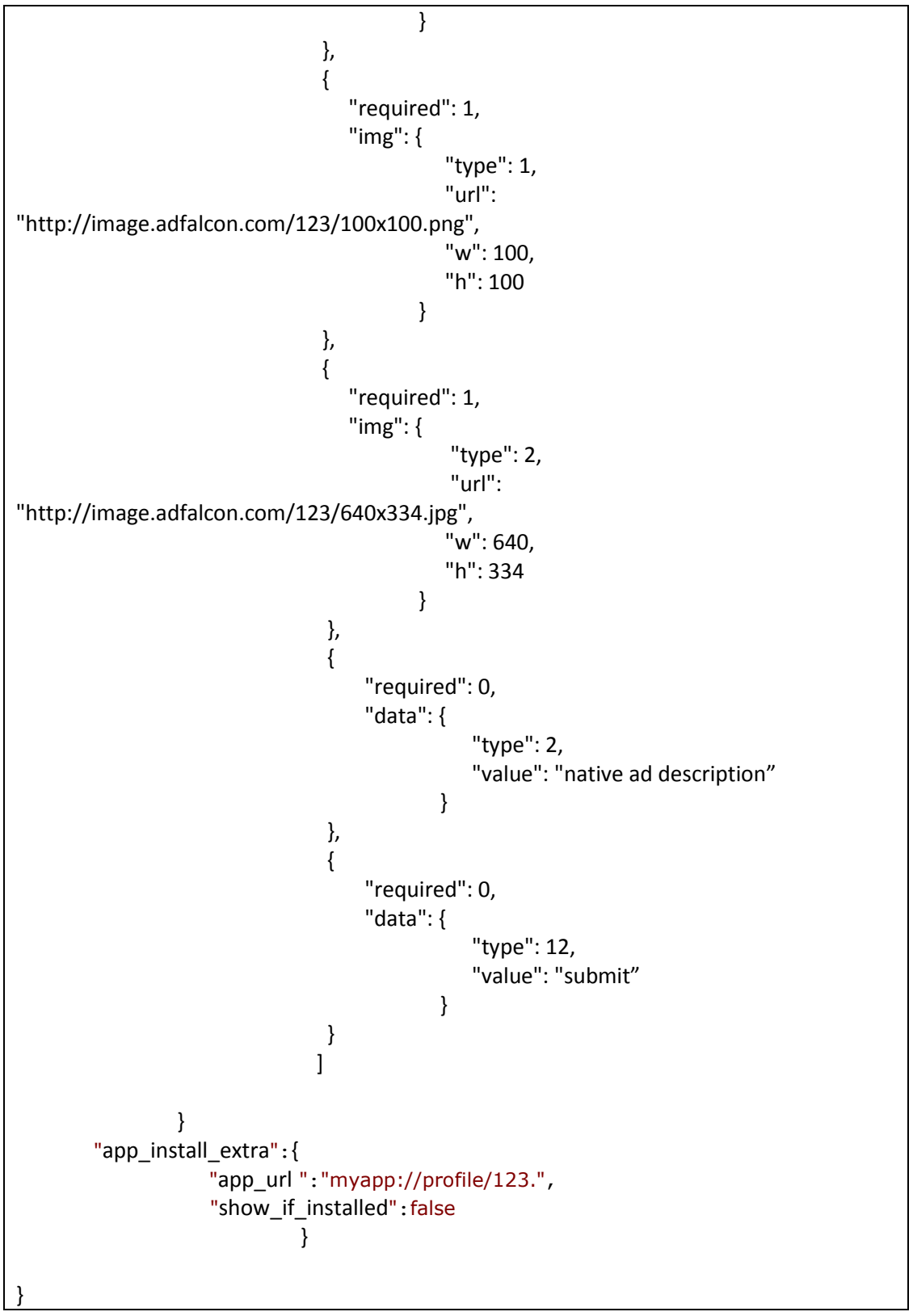
Note: *In case of in-app ad, the ad container should intercept the click action and open the action url in a web browser.*

Native Ad

Native Ad responses are always of “native” type. Below is a sample Native Ad response:



```
{
        "responseType":"native",
        "adType":”native”
        "adAction":{
                    "type":"app",
                    "action_url" : "http://api.adfalcon.com/C/x/xxxxx/xxxx/x",
                    "actionInfo_url" : "http://api.adfalcon.com/CI/x/xxx/xx/x",
                    "trackers" : ["http://clicktrackers1/x/xxxxx/xxxx/x”,
                                  "http://clicktrackers2/x/xxxxx/xxxx/x”,
                                  "http://clicktrackers3/x/xxxxx/xxxx/x”]
                },
        "beacons" : [“http://api.AdFalcon.com/B/x/xxxxx/xxxx/x”],
        "native":{
                    "assets": [
                                {
                                    "required": 1,
                                    "title": {
                                                "text": "This is ad title"
```



```
                                        }
                                    },
                                    {
                                        "required": 1,
                                        "img": {
                                                "type": 1,
                                                "url":
"http://image.adfalcon.com/123/100x100.png",
                                                "w": 100,
                                                "h": 100
                                        }
                                    },
                                    {
                                        "required": 1,
                                        "img": {
                                                 "type": 2,
                                                 "url":
"http://image.adfalcon.com/123/640x334.jpg",
                                                "w": 640,
                                                "h": 334
                                        }
                                     },
                                     {
                                          "required": 0,
                                          "data": {
                                                    "type": 2,
                                                    "value": "native ad description”
                                                }
                                     },
                                     {
                                          "required": 0,
                                          "data": {
                                                    "type": 12,
                                                    "value": "submit”
                                                }
                                     }
                                    ]

                    }
            "app_install_extra":{
                        "app_url ":"myapp://profile/123.",
                        "show_if_installed":false
                                }

}
```

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",
        "adAction":{
                        "trackers" : ["http://clicktrackers1/x/xxxxx/xxxx/x",
                                      "http://clicktrackers2/x/xxxxx/xxxx/x",
                                      "http://clicktrackers3/x/xxxxx/xxxx/x"]
                    },
        "beacons" : ["http://impressiontracker/x/xxxxx/xxxx/x"],
        "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",
        "adAction":{
                        "trackers" : ["http://clicktrackers1/x/xxxxx/xxxx/x",
                                      "http://clicktrackers2/x/xxxxx/xxxx/x",
                                      "http://clicktrackers3/x/xxxxx/xxxx/x"]
                    },
        "beacons" : ["http://impressiontracker/x/xxxxx/xxxx/x"],
        "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",
                },
        "beacons" : ["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 Interstitial Ad represented by URL:

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

	1	No Ad Available
	2	Invalid Parameters
	3	Missing Required Parameters
	-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://cdn01.adfalcon.com/static/js/adfalcon-web-all-1.0.0.js"></script>
<script type="text/javascript">

var adFalconInstance74f4281393224fb687afc22830e94180 =
new adFalcon("InstanceKey74f4281393224fb687afc22830e94180", {});

adfMain("InstanceKey74f4281393224fb687afc22830e94180",
{"content":"<a href="http://api.adfalcon.com/C/xxxxxxxxxxxxxxx" target='_blank'>
<img src="http://xxxxxx/xxx.jpg" width="728" height="90"/></a>
<img src="http://api.adfalcon.com/B/xxxxxxxxxxxxxxx" alt="" width="1" height="1"
style="position:absolute;visibility:hidden"/>",
"adType":"plainhtml","responseType":"content","adSize":[728,90],"pac":"false",
"settings":{"adTtl":-1,"adVwDur":1000,"adVwPct":0.5,"EA":-1}});
</script>
```

VAST 2.0

The IAB's Video Ad Serving Template (VAST) specification is a universal XML schema for serving in-stream video ads to digital video players, for more information please visit this link: Digital Video Ad Serving Template (VAST) 2.0.

Supported VAST 2.0 specs:

- Linear Ads only
- InLine – Impression: is mandatory to be fired when returned in the response
- Linear – TrackingEvents - The below Tracking events are supported and required to be fired when included:
    - creativeView,
    - start,
    - midpoint,
    - firstQuartile,
    - thirdQuartile,
    - complete
- Linear – Video Clicks – ClickThrough and ClickTracking: is mandatory to be fired when returned in the response
- Linear – MediaFiles
    - Progressive download only
    - MP4 only video format
    - FPS >=24FPS
    - Supported video resolutions are:
        - 640X360 (aspect ratio: 16:9)
        - 480X360 (aspect ratio: 4:3)

Not supported VAST 2.0 specs:

- Non-Linear Video
- Overlay Ads
- Companion Ads
- VAST Wrappers
- VPAID

Below is a sample in-stream video ad response in VAST 2.0 format:

```
<VAST version="2.0">

<Ad id="xxxxxxxxxxxxxxxxxxxxxx">

<InLine>

<AdSystem>AdFalcon</AdSystem>

<AdTitle><![CDATA[Video ad title]]></AdTitle>

<Description><![CDATA[Video Ad description]]></Description>

<Impression><![CDATA[http://api.adfalcon.com/B/xxxxxxxxxxxx]]></Impression>

<Creatives>

<Creative>

<Linear>

<Duration>00:00:30</Duration>

<MediaFiles>
```

```
<MediaFile delivery="progressive" type="video/mp4" bitrate="611" width="640"
height="360">

<![CDATA[http://video.adfalcon.com/video/xxxx.mp4]]>

</MediaFile>

</MediaFiles>

<TrackingEvents>

<Tracking
event="creativeView"><![CDATA[http://api.adfalcon.com/E/xxxxxxxxxxxx?ev=creatv]]></Tra
cking>

<Tracking
event="start"><![CDATA[http://api.adfalcon.com/E/xxxxxxxxxxxx?ev=0start]]></Tracking>

<Tracking
event="firstQuartile"><![CDATA[http://api.adfalcon.com/E/xxxxxxxxxxxx?ev=firstq]]></Trac
king>

<Tracking
event="midpoint"><![CDATA[http://api.adfalcon.com/E/xxxxxxxxxxxx?ev=midpnt]]></Tracki
ng>

<Tracking
event="thirdQuartile"><![CDATA[http://api.adfalcon.com/E/xxxxxxxxxxxx?ev=thirdq]]></Tra
cking>

<Tracking
event="complete"><![CDATA[http://api.adfalcon.com/E/xxxxxxxxxxxx?ev=complt]]></Tracki
ng>

</TrackingEvents>

<VideoClicks>

<ClickThrough><![CDATA[http://api.adfalcon.com/C/xxxxxxxxxxxx]]></ClickThrough>

<ClickTracking><![CDATA[http://www.thirdpartytracker.com/ClickTracker.aspx]]></ClickTrac
king>

</VideoClicks>

</Linear>

</Creative>

</Creatives>

</InLine>

</Ad>

</VAST>
```

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 Native Ad:n
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	Boolean	NO	R_STG=true	If the value of this parameter is true,

	settings				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_CAPS	Supported Capabilities	String (Comma Separated Values)	NO	D_CAPS=mraid1,mraid2	Below is the list of supported capabilities: • mraid1 • mraid2 • inlinevideo • autoplay

Unique User Identification

R_UUID	User ID	String	NO	R_UUID=645351321	User ID
D_UID_IDFA	Identifier For Advertising	String	NO	D_UID_IFA=xxxx	▪ In iOS 6 and higher: The value of advertising Identifier property. This is sent plain without any hashing.

					In Android 4.4 and higher: The value of the Android advertising ID. 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	Indicates whether the user has limited ad tracking. This parameter is required when the device ID parameter D_UID_IDFA is used Values: In iOS 6 and higher • 'TRUE' if the device's value for advertisingTrackingEnabled is set to 'True' • 'FALSE' if the device's value for advertisingTrackingEnabled is set to 'False' In Anrdoid 4.4 and higher • 'TRUE' if the device's value for isLimitAdTrackingEnabled is set to 'False' • 'FALSE' if the device's value for isLimitAdTrackingEnabled is set to 'True'

D_UID_ODIN1	ODIN-1	String	NO	D_UID_ODIN 1=xxxxx	ODIN-1
D_UID_OPEN UDID	OpenUDID	String	NO	D_UID_Open UDID=xxxxx	OpenUDID
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_I MEI	IMEI hashed with MD5	String	NO	D_UID_MD5_ IMEI=xxxxx	IMEI hashed with MD5
D_UID_SHA1_I MEI	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 Unique ID	String	NO	D_UID_ WINID=xxxxx	Windows Phone Device 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

In-Stream Video Ad Parameters

R_VT	Supported Video Types	String	NO	R_VT = video%2Fmp4	This should be URL encoded

R_VDM	Supported Video Delivery Methods	int	NO	R_VDM=2	Only progressive (2) is supported
R_VMinD	Video Min Duration	int	NO	R_VminD=15	Supported video durations are: ▪ 15 seconds ▪ 30 seconds
R_VMaxD	Video Min Duration	int	NO	R_VMaxD=30	Supported video durations are: ▪ 15 seconds ▪ 30 seconds
R_VW	Video Width	Int	NO	R_VW=480	Supported video resolutions are: ▪ 640X360 (16:9) ▪ 480X360 (4:3)
R_VH	Video Height	int	NO	R_VH=360	Supported video resolutions are: ▪ 640X360 (16:9) ▪ 480X360 (4:3)
R_VMinBR	Video Min Bitrate	Int	NO	R_VMinBR=250	
R_VMaxBR	Video Max Bitrate	int	NO	R_VMaxBR=1024	

Native Ad Parameters

R_NASSETS	Native Ad Assets	String	Yes in case of native ads	R_NASSETS=title,icon,image	
R_NTRF	Is Native Ad Title Mandatory	Boolean	NO	R_NTRF=true	
R_NTML	Native Ad Title Max Length	int	NO	R_NTML=20	
R_NIRF	Is Native Ad Icon Mandatory	Boolean	NO	R_NIRF=true	Defaults to false
R_NIW	Native Ad Icon Width	Int	NO	R_NIW=100	
R_NIH	Native Ad Icon Height	int	NO	R_NIH=100	
R_NILA	Is Larger	Boolean	NO	R_NILA=true	Defaults to true

	Native Ad Icon Allowed				
R_NIMime	Native Ad Icon MIME Type	String	NO	R_NIMime=image%2Fjpg	This should be URL encoded
R_NMRF	Is Native Ad Image Mandatory	Boolean		R_NMRF=true	Defaults to false
R_NMW	Native Ad Image Width	int		R_NMW=1200	
R_NMH	Native Ad Image Height	int		R_NMH=1000	
R_NMLA	Is Larger Native Ad Image Allowed	Boolean		R_NMLA=true	Defaults to true
R_NMMime	Native Ad Image MIME Type	String		R_NMMime=image%2Fjpg	This should be URL encoded
R_NMASSRF	One Main Asset Required Flag	Enum 0: Unspcified 1: Optional 2: One Asset Mandatory		R_NMASSRF=2	Defaults to 0
R_ND**X**RF	Data Asset **X** Required Flag	Boolean		R_ND**X**RF=true	*Refer to **5*** Appendix B: Native Ad Data Asset Types for the IDs of the asset types. Example parameter names are: ***Description* Asset** (R_ND2RF,), **Rating Asset**(R_ND3RF). **CTA Text Asset**(R_ND12RF) Defaults to false
R_ND**X**ML	Data Asset **X** Max Length	int		R_ND**X**ML=30	*Refer to **5*** Appendix B: Native Ad Data Asset Types**.Error! Reference source not found.** for the IDs of the asset types. Example

	parameter names are: ***Description*** **Asset** (R_ND2ML), **Rating Asset**(R_ND3ML). **CTA Text Asset**(R_ND12ML)

5 Appendix B: Native Ad Data Asset Types

ID	Name	Description	Format
1	Sponsored	Sponsored By message where response should contain the brand name of the sponsor.	Text
2	description	Descriptive text associated with the product or service being advertised.	Text
3	rating	Rating of the product being offered to the user. For example an app's rating in an app store from 0-5.	Number formatted as string
4	likes	Number of social ratings or "likes" of the product being offered to the user.	Number formatted as string
5	downloads	Number of social ratings or "likes" of the product being offered to the user.	number formatted as string
6	price	Price for product / app / in-app purchase. Value should include currency symbol in localised format.	number formatted as string
7	saleprice	Sale price that can be used together with price to indicate a discounted price compared to a regular price. Value should include currency symbol in localised format.	number formatted as string
8	phone	Phone number	Formatted string
9	address	Additional descriptive text associated with the product or service being advertised	Text
10	desc2	Additional descriptive text associated with the product or service being advertised	Text
11	displayurl	Display URL for the text ad	Text
12	ctatext	CTA description - descriptive text describing a 'call to action' button for the destination URL	Text
13	views	Number of views of this ad	Number formatted as string