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PCHboost

PCH REST Contest API Documentation

Overview and Technical Specifications Document

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1.0 Synopsis – The PCH Contest API is designed for the purpose of allowing PCH partners to enter their customers into PCH contests.

1.1 PCH Hardware and Software Architecture

1.1.1 Server Hardware Specification – (View Diagram 1a) – Scalable Apache Web Server farm and Database servers (Amazon EC 2). SCALR, cloud computing, is used for scalability and redundancy.

1.2 Application Description – This application can be used by PCH partners to interface directly with PCH contest entries. The API is a REST application using Ruby and Sinatra. The backend database is MongoDB and PCH uses Apache Web Servers hosted on Amazon EC 2 Farm. SCALR is used for scaling and load balancing.

1.2.1 Database – MongoDB is an open source, schema free, document oriented database. More information is available at <http://www.mongodb.org>.

1.3 Security Features

1.3.1 Authorization for API – Each PCH partner application is assigned an application id. When the PCH Contest API is called the application id is passed to PCH.

1.3.2 Partner Authentication Method –

1.3.2.1 Application ID and Secret Key – Application ID is used to identify a partner and is provided by PCH. PCH will provide both an application_id and a secret_key via a secure channel to all PCH partners. The partner's secret_key will be used to generate a signature which uniquely identifies and authenticates the partner.

1.3.2.2 Signature for Partner Data Authentication – The signature is sent as an input parameter to the API. It is ^{Diagram 1a} ~~generated~~, concatenating the contest id, the unique contest entrant id, and the secret key together, and taking the SHA-256 digest of that string. In mathematical terms, signature=sha256(contest_id+application_entrant_id+secret_key)

2.0 API Details and Programmatic Specifications

2.1 Base URL: http://BASE_URL/entries

2.2 Protocol: Hypertext Transfer Protocol (HTTP) Post over SSL

2.3 API Input Parameters

Parameter Name	Description	Required (Y/N)	Format
first_name		Y	
last_name		Y	
email		Y	
address1		Y*	
address2		N	
city		Y*	
state		Y*	2 char (pcode)
zip		Y*	xxxxx-xxxx
gender		N	M or F
birth_date		N	mm/dd/YYYY
mobile_number		N	xxx-xxx-xxxx (numeric)
contest_id	PCH assigned code, unique to each application id	Y	
application_id	PCH assigned alphanumeric code to a partner application when it is registered in the system	Y	
application_entrant_id	A unique identifier created and maintained by the PCH partner that is associated with customer information and identifies the contest entrant. This parameter should be a unique 15 character alpha-numeric string. PCH will define a range for this parameter.	Y	15 digit alphanumeric
signature	Generated by PCH using SHA-256 hash of a string concatenation of contest_id+application_entrant_id+secret_key	Y	

* Alternative method of transferring address information available. Details below in section 3.0.

2.4 Response Details

2.4.1 On Success

Response	Description
HTTP 204	success, no content

2.4.2 On Failure

Response	Description
HTTP 500	Internal server error, a system level error occurred
HTTP 400	The data sent is invalid. Plain text response sent in the HTML response body. Multiple errors will be separated by carriage returns. Example error messages: <ul style="list-style-type: none"> • A valid contest_id is required • A valid application_id is required • A valid signature is required

3.0 User Address Information Alternative Communication Methods

3.1 Description – PCH requires address information of all contest winners. Some partners may choose not to send address information of Web users unless the user is a PCH contest winner. In this case, PCH will accept an entrant_data_signature parameter.

3.2 Alternative API Parameters – In this case, the partner will pass the following parameters to the PCH Contest API

Parameter Name	Description	Required (Y/N)	Format
entrant_data_signature	SHA-256 hash (string concatenation)**	Y	
contest_id	PCH assigned code, unique to each application id	Y	
application_id	PCH assigned alphanumeric code to a partner application when it is registered in the system	Y	
application_entrant_id	A unique identifier created and maintained by WildFire that is associated with customer information and identifies the entry as unique. This parameter should be a unique 15 character alpha-numeric string. PCH will define a range for this id.	Y	15 digit alphanumeric
signature	Generated by PCH using SHA-256 hash of a string concatenation of contest_id+application_entrant_id+secret_key	Y	

3.3 SHA-256 Cryptographic Hash – **Partners should submit address information contained in the entrant_data_signature parameter to PCH in a SHA-256 hash of the string concatenation of first_name+last_name+street_number+street_address+state+zip.

3.4 Partner Address Information Transfer Details – The partner application should send address hash instead of the full address information. Partners should follow these guidelines:

- The partner application should send the address hash (instead of the full address) of the user.
- The partner application should provide a web service for address lookup once the entry has been chosen as a winner.
- The input to this web service should be the email address of the entrant and/or the address hash.
- The response should be the full address in tab delimited or XML format.
- If address hash is provided by the partner, the partner should also provide the key so that PCH can have access to the address information.

4.0 Get Contest Information

4.1 GetContestInfo API – Online method for grabbing contest information from PCH.

PCH has developed an API that will allow PCH partners access to contest information. The

API will return all contest data including announcement date, prize value, key, cost per entry, contest name, banners (including type, mime type, url, and dimensions), contest rules, start date, end date, and sweeps facts. The second call in the API is for the purpose of downloading the banner images for the contests.

4.2 Input and Output Parameters for GetContestInfo API:

Parameter Name	Description	Required (Y/N)	Format
app_id	PCH/admin assigned alphanumeric code to a partner application when it is registered in the system	Y	
Signature	Generated by PCH using SHA-256 hash of a string concatenation of app_id+secret_key	Y	

Return Parameters: JSON structure containing the current contest list and boost logo:

Return Parameter Name	Description	Format
announcement_date	Date the contest is announced	
prize_value	Monetary value of the prize	
key	Contest key	
cost_per_entry		
name	Contest name	
templates	Contains banner information including name (template name), mime_type, url (image location), dimensions, and type (header).	
pch_contest_rules	Rules for the contest	
start_date	The start date of the contest	
end_date	The end date of the contest	
boost_logos	Mime_type, url, dimensions	
pch_sweeps	Sweepstakes facts	

4.3 Code Example:

```
{
  "contests":[
    {"announcement_date":"2010-02-28T05:00:00Z",
      "prize_value":10000000.0,
      "key":"ABC123",
      "cost_per_entry":0.0,
      "name":"Mega Millions",
      "templates":[
        {"name":"Test Template",
          "banners":[
            {"type":"header",
              "mime_type":"image/gif",
              "url":
                "http://staging.boost.pch.com:80/templates/4b1f0d41e051c91325000001/banner/1",
              "dimensions":"784x120"},
            ]
          }
        ]
      }
    ]
  }
```

```

        {"type":"header",
        "mime_type":"image/gif",
        "url":"http://staging.boost.pch.com:80/templates/4b1f0d41e051c91325000001/banner/2",
        "dimensions":"390x120"}
    ]}],
    "pch_contest_rules":null,
    "start_date":"2009-12-01T05:00:00Z",
    "pch_sweeps_facts":null,
    "end_date":"2010-02-09T05:00:00Z"}],
    "boost_logos":[
        {"mime_type":"image/jpg",
        "url":"http://a1708.g.akamai.net/f/1708/179/1h/image.pch.com/media/homepage/assets/masthead.jpg",
        "dimensions":"372x62"}
    ]
}

```

4.4 Banner Call (GetContestInfo API) – Get Banner Images – In this second call in the GetContestInfo API, a partner can retrieve a banner image for a contest.

4.4.1 Information:

URL: /templates/{template_id}/banner/{banner_number}
Params: app_id and signature (same as above)
Returns: banner image (binary)

Note: Testing environment: On the staging environment, there is an application named "WF Facebook Apps" with id 4b1ebc9de051c9126a000003 and secret key 29a5f794a8cd45e6cdb1f339d6209ccab62a3ab6b2c65e5a1265418b70931848

So to get the contest list, the following url is required:

http://staging.boost.pch.com/contests?app_id=4b1ebc9de051c9126a000003&signature=a16b0dc24796f03a92a39fbb470d8429863a15653a20476a4ded3d330d768fda