Happy Brain App Services

Note: Throughout this document, the Happy Brain App server will be referred to as “the Server”.

Currently, three (3) services exist, but more can be added as the app evolves.

**Service Templates**

The following service templates are shown in **GET** format, but all requests must be in **PUSH** form.

Add New Mobile Device to the Server

https://[Server URL]/service.php?secret=[secret]&action=add

Retrieve Next Page from the Server

https://[Server URL]/service.php?secret=[secret]&action=request&mobileid=[mobileid]

Submit a Comment from the Mobile Device to the Server

https://[Server URL]/service.php?secret=[secret]&action=post&mobileid=[mobileid]&comment=[comment]

**Service Descriptions**

Server Secret

The server secret is a simple, but effective, technique for preventing unauthorized access to the services provided by the Happy Brain App server. An additional benefit of this technique is that it thwarts disruptive attacks such as Denial of Service (DoS).

The server secret (UnFkFzLqOwNtXkS7KpFa2tTzSuFaUuNf) must be included with all service calls.

HTTP Transmission Methods

The Happy Brain App server supports both of the HTTP transmission methods: PUSH and GET. Although both transmission methods are supported, PUSH is the preferred method for two (2) reasons: 1) POST provides an extra level of security when compared to GET, and 2) since GET is supported primarily for testing, support for GET will be deprecated in the near future. In the event a service request contains unknown or unexpected values, the Server will return error code **HBA00001** (see Error Descriptions).

Add New Mobile Device to the Server

This service should be called only once when a mobile device connects to the Server for the first time. This service will return either a unique **Mobile ID** for the mobile device or error code **HBA00002** (see Error Descriptions). The Mobile ID is a 17-character alphanumeric JSON-encoded string consisting of the prefix **UNF\_** and 13 hexadecimal digits (ex: UNF\_5ae8e42a93ff0).

Since the Mobile ID is the only way for a mobile device to identify itself to the Server, the mobile device is responsible for storing the Mobile ID locally.

Requesting the Next Page from the Server

This service is called when the mobile device needs to display the next page in a sequence. If the mobile device making the request provides an invalid or unknown Mobile ID, the Server will return error code **HBA00003** (see Error Descriptions).

This service functions automatically meaning that the mobile device does not need to record or provide any information about a particular page – the mobile device simply requests the next page. This service functions using the following algorithm:

* If no page is already assigned to the mobile device making the request,
  + The first page of the first group is returned
* If a page is already assigned to the mobile device making the request,
  + If additional pages exist in the current group,
    - The next page in the current group is returned
  + If no additional pages exist in the current group,
    - The first page of the next group is returned
  + If no additional groups exist,
    - The Server will return error code **HBA00004** (see Error Descriptions)

The service returns the page selected by the above algorithm to the mobile device as a JSON-formatted array of values (see example on next page).

Submit a Comment from the Mobile Device to the Server

This service should be called whenever the mobile device needs to submit a comment for the current page being displayed on the mobile device. This service will return status code **HBA00005** (see Status Descriptions) or error codes **HBA00000** or **HBA00003** (see Error Descriptions) as a JSON-encoded string.

Sharing a Direct Link to the Current Page

When a page is requested by a mobile device, the service provides a direct link in the provided JSON-formatted data that can be shared through social media posts. When a visitor clicks on the direct link, the visitor will see the page in their browser window. The page displayed in the web browser will appear exactly like the page viewed on the mobile device with the exception that a user will not be able to submit a comment or reflection.

JSON Data Information

*Page Data Template in JSON Format*

{"Title":"[page title]","Point\_1":"[point 1 text]","Point\_2":"[point 2 text]","Point\_3":"[point 3 text]", "Message":"[message text]","Reflect":"[false, true]","URL":"[url text]","Filename":"[filename]",

"PageURL":"[url text]"}

*Page Data Example in JSON Format*

{"Title":"Be the Boss","Point\_1":"Think of a past situation where you felt that the outcome was not in your control.","Point\_2":"Write down 3 things you could have done to change the situation.", "Point\_3":"Throughout the day, remind yourself of what you wrote down.","Message":"Research shows that when we change our perception about our ability to control a situation, it can change the way we use our brain. When people believed they could change an outcome, they used their left hemisphere of their brain, which indicates that they had an internal locus of control. ","Reflect":"false", "URL":"http:\/\/www.socialemotiveneuroscience.org\/pubs\/hj\_etal2003cog\_emot.pdf","Filename":"http:\/\/www.happybrainapp.com\/images\/5acbb20e11a21.png","PageURL":"http:\/\/www.happybrainapp.com\/service.php?action=view\_page&pageid=5b8491c1c3a6e4.06941606"}

**Error Descriptions**

HBA00000

*Meaning*

An unexpected error occurred during the last operation.

*Cause*

Unknown.

*Corrective Action*

None.

HBA00001

*Meaning*

An unrecognized request was received by the Server.

*Cause*

An improperly formatted or incorrect request submitted to the Server.

*Corrective Action*

Check the request and try again.

HBA00002

*Meaning*

The Server was not able to generate a unique Mobile ID for the requesting mobile device.

*Cause*

Two or more mobile devices simultaneously attempted to add a new device to the Server. This is a rare condition even in a busy environment.

*Corrective Action*

Simply resubmit the request to add new device.

HBA00003

*Meaning*

The specified mobile device Mobile ID does not exist on the Server.

*Causes*

The specified mobile device 1) is invalid or 2) was deleted from the Server.

*Corrective Actions*

1) Verify the mobile device Mobile ID is accurate or 2) request to add the mobile device to the Server.

HBA00004

*Meaning*

The last page of the Server has been viewed.

*Cause*

The mobile device has displayed all of the pages available on the Server.

*Corrective Action*

None.

**Status** **Descriptions**

HBA00005

*Meaning*

The data submitted by the mobile device was stored successfully.