**Baroda Rewardz – Offers API Technical Integration Document**

By Loylty Rewardz Mngt. Pvt. Ltd. (The only Loyalty company with PCI-DSS Certification)

बैंक ऑफ़ बड़ौदा
**Bank of Baroda**

Baroda
Rewardz

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## 0 PREFACE

### 0.1 PURPOSE OF THIS DOCUMENT

#1 *This document is a generic Technical Document for use by Loylty Rewardz Projects. It provides guidance and template material which is intended to assist the relevant management or technical staff, whether client or supplier, in producing a project-specific Technical Document. It is also useful background reading for anyone involved in developing or monitoring the Loylty Rewardz System Projects.*

### 0.2 Version History

| Version | Date | Author | Comments |
|---------|------|--------|----------|
| *1.0* | *9 June , 2017* | *Saurabh Sabnani* | *Initial Draft* |

### 0.3 USE OF THIS DOCUMENT

#1 *This Preface is addressed to the users of this generic document and is not meant to be retained in any project-specific Technical Document documents based on it.*

#2 *The remaining sections (numbered 1, 2, 3,…) constitute a template that should be used to construct the project-specific Technical Document.*

- *Text in italics provides instructions on how to complete a section and should be removed once the section is written.*

#3 *The template should be used pragmatically, that is - where a section is not relevant it should be omitted. Conversely, the material contained in this document is not necessarily exhaustive; if there is a subject that is relevant to the Loylty Rewardz Projects, but is not included in this document, it should still be included.*

### 0.4 Overview

*#1*    *This section should provide an overview of the entire document and a description of the scope of the system and its intended usage. The scope should also describe external interfaces to the system, external dependencies and provide a brief overview of the 'characteristics' of the system, commenting on aspects such as real-time use, security considerations, concurrency of users etc.*

### 0.5  Basis of this Document

*#1*    *The purpose of this document is to explain the requirements for achieving the technological integration to implement offers with the Bank's various channels such as mobile banking app, wallets, UPI, internet banking.*

### 0.6    A REFERENCE ARCHITECTURE FOR THE OFFERS PROGRAMME

*#1*    *The Reference Architecture is an n-tier, client-server model as its basis, and state that the persistence layer would be implemented through a number of standard API[1] calls to a particular database system. This use of a Reference Architecture would provide some guidelines to organisations tasked with developing individual elements of the Offers Programme and would, in time, move solutions towards a common homogeneous standard – with all of its associated benefits.*

### 0.7    SPECIFIC DOCUMENT CONSIDERATIONS

*#1*    *It is possible that future projects will involve more frequent updates from participating administrations. In this case attention in the Reference Architecture to the loading on computer systems will be necessary*

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1 Application Program Interface

**1 Architecture Diagram of Offers Module**
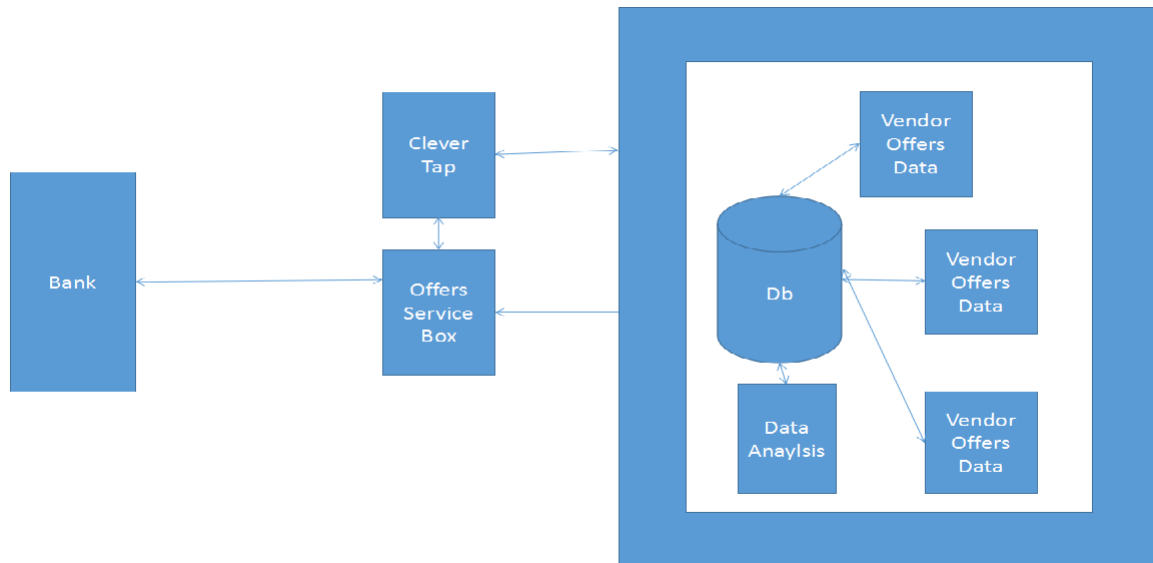


## 1.1    Basis of this Document

*1# Every program uses the Offers Plugin (Offer Service Box and CleverTap) to extract offers for        Particular        consumer        on        basis        of        Following.*

    *A# User's Historical Buying/Viewed items.*

    *B# Frequent Popular Deals Used /Consumed.*

    *C# Offers available near his Location.*

*2# Offers Data is sync on periodically from Vendor in our Database end.*

*3# Brand Partner Offers (Ex LifeStyle Offers ) are uploaded by Offer panel. Both Offline and Online Offers Can be uploaded through Offers Panel.*

*4# Consumer can locate and reach Brand Store though Google Map and Customer can see their nearby brand store and offers within particular range (15-20 km) through Geo Location.*

*5# CleverTap tool is used in Offer Module to track the user data for particular events and for analytics purpose.*

*6# CleverTap is a used for user engagement and as analytics platform that is real-time, omni-*

*channel, and works blazingly fast no matter what scale.*

*7# Trending or featured Offers of particular Brand partners are uploaded through offer Panel and same offers are render with banner size on every Program.*

*8# Every Consumer activity (every click on particular Offers and viewed offers) on any program (Mobile App or Web Portal) is tracked in Db and CleverTap.*

*9# Data Analysis is done periodically to determine offer popularity and Consumer favourite Categories.*

*10#        Offers       can       be       subdivided       into       two       types*
   *A# Activated Deals*

   *B# Coupon Offers*

*11# Coupon Code can be accessed and consumed by using Coupon Offers without any fare.*

*12# Consumer can make particular Offer as favourite offer.Favorite Offers are shown to consumer as different section up till validity of offers is expired.*

*13# On periodically Basis, Score for all offers is determined and is sync with Offer Database.*

*14# Consumer can access to his favourite Brand Offers and can uses the coupon code to save the                                                                                             money.*

*15# Offline offers can be redeem at brand stores. Even User's rewardz points can redeem for buy any items having some offers on it.*

**2 API**

*2.1   API Parameters*

1 Header Parameter

| Header Parameter | Description | Type |
|---|---|---|
| Content-Type | Application/json | String |
| Banking Channel Id | MobileBanking(1) | String |
| | InternetBanking(2) | |
| | BankUPi(3) | |
| | BankWallet(4) As Above value in encrypted Format | |
| Password | Password in encrypted Format .( Password will provided alter) | String |
| UserName | UserName in the encrypted Format.(UserName will provided alter) | String |
| CustomerDetails | Mobile or CustomerId As per Channel in encrypted Format. | String |

**2.2 API Call**

**Description**

1. GetAllCategories - This API method provides all Category and their details. This Method is independent from all API call.

2. GetBrands - This API method provides to extract all Category and their details. This Method is independent from all API call.

3.  GetTrendingOffers  -  This  API  method  provides  all  featured/Trending  Offers.

When any filter (brand, category, and channel) is applied, only filter parameter values has no effect be added in particular request parameter.

3. GetOfferList - This API method provides list of offer and same API is used when any filter (brand, category, channel) is applied, only filter parameter values should be added in particular request parameter.

4. GetOfferDetails - This API method provides all offer details for any particular offer. This API call should be made when user click on any offer from offerlist to get the details for a particular offer. (Kindly Refer User flow Document)

6. ActivateDeal - This API method is used to store Offer details which user has gone through and is navigated to brand site through offerImageUrl. This API call should made when any click on "ActivatedDeal" from offer details page is made. (Kindly Refer User flow Document).

7. SearchOffer - This API mehtod is used to search offer, brands and category. This Method is independent from all API call.

## 2.3 API Calls Signatures

**URL**: http://192.168.61.165/Offers/v5/api/OfferAPI/

**Methods:**

1. **getOfferList**

URL- http://192.168.61.165/Offers/v5/api/OfferAPI/getOfferList

**HTTP Method**: POST

**Headers**: All Parameters as mentioned in Header Parameter Section

**Request Body:**

```
{
"CategoryIds": [],
"BrandIds": [],
"ChannelId": 0,
"Latitude": "72.67",
```

```
"Longitude": "45.90",

"pageNumber": 5,

"itemCount":10,
}
```

| Request Parameter | Description | Type |
|---|---|---|
| Longitude | Longitude Of User | Float |
| ChannelId | 0  Nothing Online or Offline is selected | numeric |
| | 1  If Offline is selected. | |
| | 2  If Online is selected. | |
| | 3  If both Online and Offline are selected. | |
| Latitude | Latitude of user | Float |
| CategoryIds | Array of selected categoryIds | Int Array |
| | | Int Array |
| brandIds | Array of selected BrandIds | |
| pageNumber | Index/Page of Offer Listing | Numeric |
| Itemcount | Count of offers Elements per call | Numeric |

**Response**:

```
{
 "isAuthorised": 0,

 "Code": 100,

 "Message": null,

 "Succeeded": 1,

 "Data": {

   "offerLogId": 122,
```

```
  "offerTimeStamp": "4/21/2017 2:24:12 PM",

  "nextItemCount": 10,

  "offers": [

   {

    "providerName": "Grabon",

    "offerTitle": "Personalized T-Shirts @ 20% OFF",

    is

 "offerURL": "http://www.grabon.in/load/cpn?go=12099&appuserID=7&isDeal=False",

    "bannerImageUrl": "",

    "categoryId": [

      4

    ],

"categoryImageURL":
"http://192.168.61.165/Offers/V2/Category%20icons/multicategory_icon.png",

"offerImageURL":              "http://cdn.lmitassets.com/gograbon/images/merchant/printland-
1438680878131.jpeg",

    "channelId": 0,

    "offerId": 40995,

    "startDate": "4/21/2017 1:24:32 PM",

    "endDate": "4/28/2017 12:00:00 AM",

    "validity": "21 Apr 2017 to 28 Apr 2017",

    "brandName": "Printland"

   },

   {

    "providerName": "Grabon",

    "offerTitle": "Upto 20% OFF on Kitchen Appliances",
```

```
        "brandId": 9583,

"offerURL": "http://www.grabon.in/load/cpn?go=1118&appuserID=7&isDeal=True",

      "bannerImageUrl": "",

      "categoryId": [

       21

      ],

"categoryImageURL":
"http://192.168.61.165/Offers/v1/Category%20icons/Accessories_icon.png",

"offerImageURL":          "http://cdn.lmitassets.com/gograbon/images/merchant/pepperfry-
1457361830833.jpeg",

      "channelId": 0,

      "offerId": 41117,

      "startDate": "4/21/2017 1:20:18 PM",

      "endDate": "9/30/2018 12:00:00 AM",

      "validity": "21 Apr 2017 to 30 Sep 2018",

      "brandName": "Pepperfry"

    }

   ]

 }
}
```

Response Parameter Description

| Response Parameter | Description | Type |
|---|---|---|
| ProviderName | Offer Provider Name | String |

| OfferId | Unique Key Number for indiviual Offer | String |
|---|---|---|
| OfferImageUrl | Image Url of particular Offer | String |
| StartDate | Showing offer from particular Date | String |
| EndDate | Showing offer till particular Date | String |
| NextItemCount | Count of offers for particular Next pagenumber to be shown. | Numeric |
| Data | Array of indiviual Api Call resposne data | String |
| BrandId | Unique Key Number for indiviual Brand | Numeric |
| offerTitle | Title for particular Offer | String |
| offerURL | Particular Url of Offer ,through which user is redirected to Brand Offer Page. | String |
| bannerImageUrl | BannerImage url of Particular Offer | String |
| categoryId | Array of category Id | Numeric Array |
| categoryImageURL | Image Url for Particular Category | String |
| offerImageURL | Image Url for particular Offer | String |
| channelId | Mode of Redeeming the offer | Numeric |
| brandName | Name of particular Brand | String |
| couponCode | Coupon Code for Coupon Offer | string |
| stepToRedeem | Step to redeem the offer | String |
| brandName | Name of brand | String |
| tnc | Terms and Conditions for particular Offer | String |

| | | |
|---|---|---|
| Code | 100 Represent Succesfull completion Int Operation of api call. | |
| | 101 Represent UnSuccesfull completion Operation of api call | |
| offerDescription | Breif Description about the Particular offer | offerDescr iption |

## 2. **getOfferDetails**

**URL**-http://192.168.61.165/Offers/v1/api/OfferAPI/getOfferDetails

**HTTP Method** : POST

**Headers**:All Parameters as mentioned in Header Parameter Section

**Request Body:**

```
{

  "offerId":40995

}
```

| Request Parameter | Description | Type |
|---|---|---|
| OfferId | Id for Particular Selected Offer. | Float |

**Response Body**:

```
{

 "isAuthorised": 0,

 "Code": 100,

 "Message": null,

 "Succeeded": 1,
```

```
  "Data": {

    "offerTitle": "Personalized T-Shirts @ 20% OFF",

    "offerId": 40995,

"offerImageURL":                    "http://cdn.lmitassets.com/gograbon/images/merchant/printland-
1438680878131.jpeg",

    "brandId": 9561,

    "bannerImageUrl": "",

"offerURL": "http://www.grabon.in/load/cpn?go=12099&appuserID=7&isDeal=False",

    "categoryId": [

      4

    ],

"categoryImageURL":
"http://192.168.61.165/Offers/V2/Category%20icons/multicategory_icon.png",

    "offerDescription": "Get smart with custom V-Neck T-Shirts from Printland at a discount of
100 rupees. Offer is valid for a Limited Period only! Shop at Print Land Online Store and get
flat 20% discount on Printed Micro-Polyester & Cool Summer Special Sports Men's T-Shirts at
Rs 199 Only. Use the coupon code to get the voluminous savings offer.",

    "channelId": 2,

    "stepToRedeem": "",

    "brandName": "Printland",

    "tnc": "",

    "validity": "21 Apr 2017 to 28 Apr 2017",

    "couponCode": "TSH20",

    "startDate": "4/21/2017 1:24:32 PM",

    "endDate": "4/28/2017 12:00:00 AM"

  }

}
```

For Description of response parameter, Kindly refer getofferlist response parameter description.

3. **GetAllCategories**

**URL**-http://192.168.61.165/Offers/v1/api/OfferAPI/GetAllCategories

**HTTP Method** : POST

**Header :** All Parameters as mentioned in Header Parameter Section.

**Request Body**:{}

**Response Body**:

```
{
  "isAuthorised": 0,
  "Code": 100,
  "Message": null,
  "Succeeded": 1,
  "Data": [
    {
      "categoryId": 4,
      "categoryName": "OTHER",
"categoryImageURL":
"http://192.168.61.165/Offers/V2/Category%20icons/multicategory_icon.png"
    }
  ]
}
```

| Response Parameter | Description | Type |
|---|---|---|
| CategoryId | Unique key for particular Category | int |

| categoryName | Name of Category | String |
|---|---|---|
| categoryImageURL | Image Url of particular category | String |

**4. GetBrands**

**URL**-http://192.168.61.165/Offers/v1/api/OfferAPI/GetBrands

**HTTP Method**: POST

**Headers**: All Parameters as mentioned in Header Parameter Section

**Request Body** :{}

**Response Body**:

```
{
  "isAuthorised": 0,
  "Code": 100,
  "Message": null,
  "Succeeded": 1,
  "Data": [
    {
    "brandId": 11214,
    "Logo":                "http://cdn.lmitassets.com/gograbon/images/merchant/srsgrocery-
1457452615301.jpeg",
    "categories": [
      15,
      7,
      9
```

```
    ],

    "brandName": "SRS Grocery"

  }

 ]

}
```

| Response Parameter | Description | Type |
|---|---|---|
| Brandid | Unique Key for particular BrandID | Int |
| Categories | Array of categories associated with particular brand | Int Array |
| brandName | Name of Brand | String |
| logo | Image Url of particular Brand | String |

5. **ActivateDeal**

**URL**-http://192.168.61.165/Offers/v5/api/OfferAPI/ActivateDeal

**HTTP Method**: POST

**Headers:** All Parameters as mentioned in Header Parameter Section

**Request Body**:

```
{

        "OfferId":447,

        "OfferLogId":119

}
```

| Request Parameter | Description | Type |
|---|---|---|
| OfferId | Id for Particular Selected Offer. | Int |
| OfferLogId | SessionId of a particular list of Offers | Int |

**Response Body**:

```
{

 "isAuthorised": 0,

 "Code": 100,

 "Message": null,

 "Succeeded": 1,

 "Data": true

}
```

| Response Parameter | Description | Type |
|---|---|---|
| Data | True signifies proper execution of operation<br>False signifies failed in execution of operation | Int |

6. **SearchOffer**

**URL**-http://192.168.61.165/Offers/v5/api/OfferAPI/SearchOffer

**HTTP Method**: POST

 **Header: All** Parameters as mentioned in Header Parameter Section

**Request Body**:

```
{

 "keyword":"ot"

}
```

| Request Parameter | Description | Type |
|---|---|---|
| keyword | On Basis of Keyword, result set of brands , categories and offers are searched. | String |

**Response Body**:

```
{

 "isAuthorised": 0,

 "Code": 100,

 "Message": null,

 "Succeeded": 1,

 "Data": {

  "Brands": [

   {

    "Id": "576bb40f4e24ae4004514b62",

    "Name": "Keys Hotels"

   }

  ],

  "Categories": [],

  "Offers": [

   {
```

```
      "Id": "576bb7a84e24aecf349c702e",

      "Name": "Silvassa : FLAT 6% OFF ON Hotel Booking"

    }

    ]

  }

}
```

| Response Parameter | Description | Type |
|---|---|---|
| Offers | Array of Offer elements. Individual Offer element Contains as Following<br><br>Id - Representing Offer id ( Int )<br>Name - Representing offer heading ( String ) | String Array |
| Categories | Array of Category elements. Individual Categoryy element Contains as Following<br><br>Id - Representing Categoryy id ( Int )<br>Name - Representing Categoryy Name ( String ) | String Array |
| Brands | Array of Brand elements. Individual Brand element Contains as Following<br><br>Id - Representing Brand id ( Int )<br>Name - Representing Brand Name ( String ) | String Array |

### 7. GetTrendingOfferList

**URL** - http://192.168.61.165/Offers/v5/api/OfferAPI/GetTrendingOfferList

**HTTP Method**: POST

**Headers**: All Parameters as mentioned in Header Parameter Section.

**Request Body**:

```
{
"CategoryIds": [],

"BrandIds": [],

"ChannelId": 0,

"Latitude": "72.67",

"Longitude": "45.90",

"pageNumber": 0,

"itemCount":10,
}
```
Description of request Parameter is same in getOfferList

**Response Body:**

```
{
    "isAuthorised": 0,

    "Code": 100,

    "Message": null,

    "Succeeded": 1,

    "Data": {

        "offerLogId": 0,

        "offerTimeStamp": "01-01-0001 00:00:00",

        "trendingOffers": [

          {

              "providerName": "Grabon",

              "rank": 1,
```

```
        "offerTitle": "Flat 75% OFF On Selected Products",

        "brandId": 1538,

        "offerURL":
"http://www.grabon.in/load/cpn/?go=42968&appuserID=7&isDeal=True",

        "bannerImageUrl": "../Content/trendingoffers/flipkart2.jpg",

        "categoryId": [

            1,

            12,

            18,

            2,

            3

        ],

"categoryImageURL":
"http://192.168.61.165/Offers/V2/Category%20icons/multicategory_icon.png",

"offerImageURL":            "http://cdn.lmitassets.com/gograbon/images/merchant/flipkart-
1480321477976.png",

        "channelId": 0,

        "offerId": 19324,

        "startDate": "14-06-2017 05:20:48",

        "endDate": "14-07-2017 05:20:48",

        "validity": "",

        "brandName": "Flipkart"

      }

    ]

  }

}
```

| Description of Response Parameter is same in getOfferList |
| --- |

## 3 Network Diagram
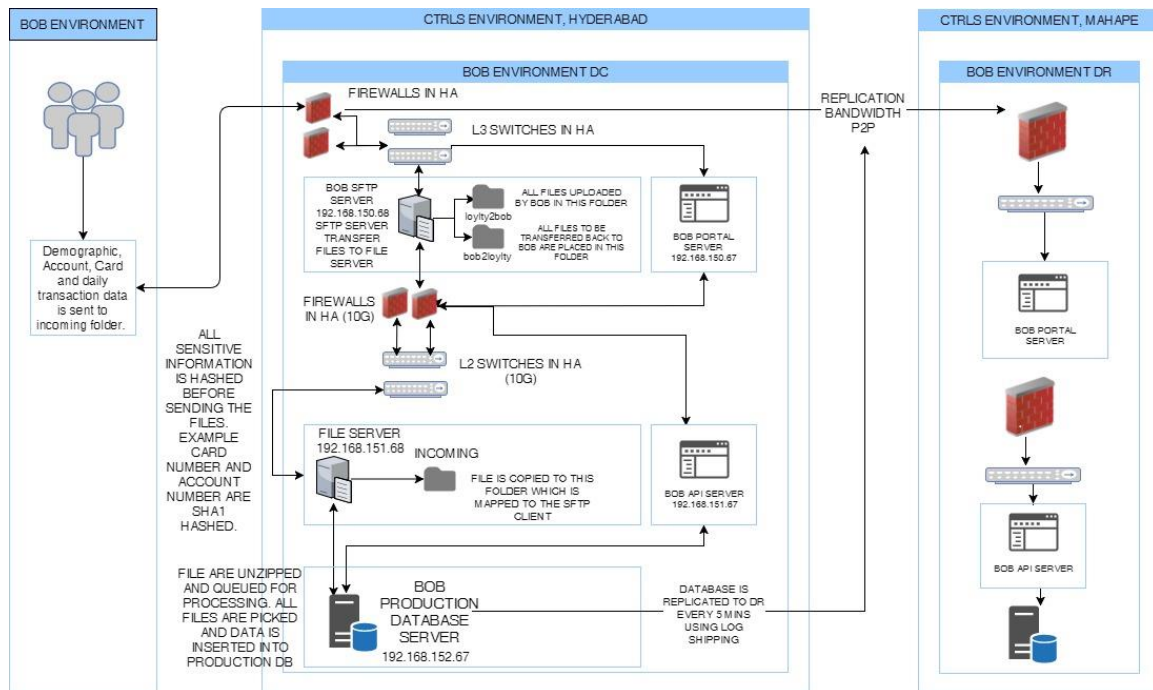


## 4 Security Details

1 SHA1 is used for secure Hash Algorithm is a cryptographic hash function.

2 AES algorithm is used as decrypt algorithm.

3 Only Bank IPs mentioned for whitelisting would be able access offer module API from our end.

-------------------------------------------------END OF NOTE--------------------------------------------------------