



Unlock the power of financial data
-Using Finduit (TSP for FIU) APIs

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What is needed from me to get started?

- A copy of your certificate of registration, issues by RBI, SEBI, IRDAI, PFRDA
- All paperwork* in place.
- All checklists duly filled up (outside the scope of this doc)
- A mechanism to call our API
- A mechanism to consume the data we send once fetched from the Financial information Provider (FIP), typically called a WEBHOOK (also called CALLBACK URL)
- *Our sales team will guide you further, outside the current scope of integration.

I am ready, now how to go about integration?

Once you have figured which digital property to integrate, web or mobile, and also figured out from which screen you will redirect your customer to approve a consent, simply start the journey by calling our “Authenticate” API. You need to pass simple username-password based credentials given to you by our team. In response, you will get a token and a session ID valid for 10 minutes.

Once Authenticated, call the REDIRECTAA API. Here, additionally, you will have to pass a GUID from your side, called “clienttxnid”. This would be the unique identifier for this transaction.

Step #1 and #2 will be sent to you as a POSTMAN COLLECTION for ease of customer onboarding, and you don’t have to do anything. In case this is not received, reach out to sales@sterlingsoftware.co.in and we will take action within a day.

Redirect your consumer to the redirect URL which is the output of step #2. Once the consumer takes action, which is either approve or reject or browser closure, you will get notified in the console of the parent browser.

For a much-standardized experience, we are helping our clients with the necessary JAVASCRIPT for opening the child browser as suggested in step 4, in a fixed aspect ratio, which is scientifically designed for optimum conversions as it works on all platforms.

- If the customer approves the consent, then TSP will pass the consent status = 'Approved' to FIU via webhook. If it’s a browser-based journey, you also get notified in your browser console.
- If the customer rejects the consent, then TSP will pass the consent status = 'Rejected' to FIU via webhook. If it’s a browser-based journey, you also get notified in your browser console.
- If the customer does not take action on the consent (Consent =Pending) then TSP will not pass any consent status to webhook. If it’s a browser-based journey, you also get notified in your browser console.
- If the consent got 'Approved' then Finduit will push to data (subject to uptime and availability of FIPs) via the webhook/call-back URLs, you have configured. This happens in an auto pilot mode, FYI.

Anything else I need to know?

- Sit together with our team and brainstorm on periodicity, validity, and frequency of your consent parameters. This is what we call a USE_CASE_ID which varies from industry to industry.
- Sit together with our team and decide on the variables: Whether you want “Pre-discovery of banks, should user be allowed to add more banks, redirect to a custom page” amongst other variables.
- Organizations having data to share must share data as per “reciprocity” principle set by all AAs. We will tell you a priori if this applies to you.
- There is a Sahamati certification which we strongly recommend you take- This ensures standardization of all participants.

- Let us know your other preferences like “what format of data is needed? Encryption needed or not. Color combination on AA page, Logo on AA page”

.....END

INITIATION OF JOURNEY

FIU will collect the mobile No/AAid along with bank name (if client needs pre discovery) at their end and will invoke the below Api's.

Authentication

FIU must invoke the Finduit Authentication API based on the redirection key as follows and gets authentication token as a response

API URL - <https://uatapp.finduit.in/api/FIU/Authentication>

Request Parameters

Postman	Fields	Datatype	Mandator y	Description	Example
Body	fiuID	string	Y	It is the constant ID shared by TSP for each FIU	Demo
Body	redirection_key	string	Y	It's the fixed key shared by AA to FIU for redirection	1D2E3M4O
Body	userId	string	Y	Admin id shared by the FIU for login. It is pre-associated with the fiuID	demo@test.com

Sample API Request

Request

```
{
  "fiuID": "Demo",
  "redirection_key": "1D2E3M4O ",
  "userId": "demo@test.com"
}
```


Postman	Fields	Datatype	Mandatory	Description	Example
Header	Authorization key	String	Y	Generated by the Authorisation API	Bearer eyJhbGciOiJodHRwOi8vd3d3LnczLm9yZy8yMDAxLzA0L3htbGRzaWctbW9yZSNoYWJjLXNoYT11NiIsInR5cCI6IkpXVCJ9.eyJmaXVJZCI6IkFCLVVBVCI6ImdvdmFydGhpbmkubUBhbGljZWJsdWVpbmRpYS5jb20iLCJzZXNzaW9uIjojNDIhZWU5Y2UtZjQ5MC00MWRkLWFjZTQtZGQwNjY4OTVjNTQ5IiwidGltZXN0YW1wIjojMDEvMDEvMDAwMSAwMDowMDowMCI6ImV4cCI6MTY0Mjc2NDY0NSwiaXNzIjoiaHR0cHM6Ly9GaW5zZXJ2ZS5jb20vSXNzdWVyaWwiyYXV
Body	clienttrnxid	String	Y	A GUID string created by FIU for each transaction when they call Finduit Redirect API. This unique reference number will act as a linkage for consent request & data for FIUs	04502d0c9c4b400388450c65fd01bd23
Body	fiuID	String	Y	ID of FIU (shared by Finduit TSP)	Demo
Body	userId	String	Y	Admin id shared by the FIU for login. It is pre-associated with the fiuID	demo@test.com
Body	aaCustomerHandleId	string	Y	Customer Address with the AA	98XXXXXXXX@CAMSAA

Postman	Fields	Datatype	Mandatory	Description	Example
Body	aaCustomer Mobile	numeric	Y	Customer mobile number	98XXXXXXXX (Can be null, Mandatory if the API needs to send SMS)
Body	sessionId	string	Y	A GUID string generated by TSP in the previous Authorisation API call	125126d1-1487-4590-85f3-8ca6262aecf3
Body	useCaseld	string	Y	Unique id for the pre- set consent parameters, to be provided by the TSP while onboarding the fiu	1 (Will be Shared based on the requirement of FIU)
Body	fipid	String	N	It will have an array of fixed value of bank name. Multiple values can be given.	Possible Values: AXIS001, fiplive@indusind, HDFC-FIP, ICICI- FIP, IDFCFirstBank-FIP
Body	addfip	String	N	Add more accounts will be suppressed if it is false. If True customer will have the CTA option to add more accounts with other mobile number also	True, False
Body	redirect	String	N	If it is 'blank' or 'N', then no redirection will happen just the child browser get closed. If it is Y, then the user will be redirected to url passed here	https://www.google.com


```
{
  "clienttrnxid": "04502d0c9c4b400388450c65fd01bd23",
  "fiuID": "Demo",
  "userId": "demo@test.com",
  "aaCustomerHandleId": "98XXXXXXXX @CAMSAA",
  "aaCustomerMobile": "98XXXXXXXX",
  "sessionId": "125126d1-1487-4590-85f3-8ca6262aecf3",
  "fipid": "",
  "Pan": "DBXPS9706N",
  "useCaseid": "",
  "Integrated_trigger_sms_email": "Y",
  "addfip": "false",
  "redirect": ""
}
```

Response Parameters

Fields	Datatype	Mandatory	Description	Example
txnid	string	Y	A unique transaction identifier created for api	eb671627-b695-47c1-a47f-d6335ee56e81
clienttxnid	string	Y	A GUID string created by FIU for every transaction and pass it to TSP to correlate PDF	e0ce3efb-3498-4eea-bc51-5205fd7e8572
sessionid	string	Y	It will be a unique id created for each user session	e9992bab-ea63-4dbd-b55a-8cbfb23b7a84
redirectionurl	string	Y	Customer will get redirected to the Camsfinserv webview page (login/signup). It contains consent parameters for the AA.	https://uat.camsfinserv.com/newuat/webview?ecreq=RUByYJcRPcl46yWOwmVodq4x4e9uFtSuvbHcALg9gmMVlugX6oqfYqpyIS4YBwYko39WLYFp1dSH-YXX7uMZa8d27wD60UNtLHVDiZveAL_QbdKd70UEbN5s0x7SCEGakq8NizL3TbOdSii4145zSjfZ7GQpPZ-5UGysKEDB3BeVer6j6VSusNotYwBCdPhwuGaVtId98jRKFG7ilrZz1bw==&reqdate=210120221631511&fi=c3MdZHNk
timestamp	String (date-time)	Y	Current Timestamp	2022-01-21T16:31:51.4559056+05:30
consentHandle	String	Y	Unique handle created for each consent	150792cd-37e4-4a2f-8895-941b14acb40d

Sample API response

```
{  
  "txnId": "eb671627-b695-47c1-a47f-d6335ee56e81",  
  "clientTxnId": "e0ce3efb-3498-4eea-bc51-5205fd7e8572",  
  "sessionId": "e9992bab-ea63-4dbd-b55a-8cbfb23b7a84",  
  "redirectionurl": "https://newuat.camsfinserv.com?ecreq=XIUPEPVW-  
6c3mmEdf6YIXvf3yn3zV44RS1T91CsALmYvICt2ag8LaSz13n5zwT7j8_sOQJWelpqQ2quLc4ml0f0G78Tirs  
-Z1hOmyjqYiKbTkzZSQrztRMTxVxzc3GyvFxc0gaEKJ3Yvy2rVOFxtaecM7fmIV_VG514Q-  
nT2zYEvOdlbKINHRKtghFU7o3NvUwoldy5SzvU_8HkB7x1v3gOalk8uqdLlIGNqBlc5tfFu6RuAglALE  
ORnl5PQ5Q3tAQLpTHdwU8M_BYdRgPFNOiw==&reqdate=050820221637461&fi=cXcdbXNk",  
  "timestamp": "2022-08-05T16:37:46.4820457+05:30",  
  "consentHandle": "150792cd-37e4-4a2f-8895-941b14acb40d"  
}
```

Opening new Popup Window (Browser) over the FIU browser (Optional)

The FIU can add the following code snippet to open a new browser over their existing window as follows.

Code snippet to setup redirection popup

The following javascript code can be placed anywhere in the html that exposes a function that can be called to open the AA popup window.

```
<script type="text/javascript"> var aaWindowObjectReference = null; function  
redirectToAA(aaRedirectionURL) { if( aaWindowObjectReference == null ||  
aaWindowObjectReference.closed) {  
    —  
    —  
  
    var width = screen.availWidth * 2 / 3 ; var  
    height = screen.availHeight * 2 / 3; var left  
    = (screen.availWidth - width) / 2; var top =  
    (screen.availHeight - height) / 2;  
  
    _aaWindowObjectReference = window.open(aaRedirectionURL, "aa",  
        'resizable=yes, width=' + width  
        + ', height=' + height + ', top='  
        + top + ', left=' + left);  
    } else {  
        aaWindowObjectReference.focus();  
    }  
}  
</script>
```

The url created in the previous API call should be passed in the aaRedirectionURL parameter.

Open popup window

On receipt of the response, the redirectURL can be captured and opened using

```
<script type="text/javascript">  
    redirectToAA(redirectURL);  
</script>
```

AddEventListener

Get data from child to parent
 window.addEventListener('message', (e) => {

console.log(e.d

ata.status,'e');

this.comingDat

a = e.data;

}, false);

Sample Response

{status: 'S', txnid: 'dbbd31b7-ce9e-44ec-8e61-182c1777e3d4', sessionid: '96c4d90a-d3ea-4656-9acd-fd240688b46a'} Consent success Status - S

Consent Reject

Status - F Status

on 'x' click - N

Redirection Approach

The customer can be redirected in the same window. The communication of consent approval or rejection post the journey happens through the URL.

The redirect back URL has to be passed in AA redirect API in “redirect” parameter if you need the customer to be redirected back to a specific url after the AA journey. Once the journey ends the following sample URL will get generated.

https://www.google.com/?ecres=Kj_Xx3RK8Kkh9DSOID5SS1KPtz6PxRL3afech6y_4yKxGK5FCavb8m3wv1ABx95hcUV_743ttzgdiQIB7M7TikuiQrJD8WIUtH8qQFs0qwDi8RMxRx3-AGyMsYO_wMDIYeLPOF4ae1U3K2ybRYhyHGxj9zfkz49wvNq9uFU30evC3PCVd1RUXH5qvXf0cpsrkNGbbj8KwodaX91nxuyOac7QJc9SGQhi3Yd0eHnq656lj-gr5gPvPOZ85OTh8qpadyN9AlkF-ghKskqFnYTkZBGZMle5P0A6yTce95WJdKaVPwbwZMhxGj5p8xJbOfUNz-0DGgDE6t8aikqd5shQ==&resdate=211020221422609&fi=c3ABAAICAAADBg==

To see the data, you have to decrypt the ecres value using the salt as resdate and use the redirection key present in AA authentication api to decrypt.

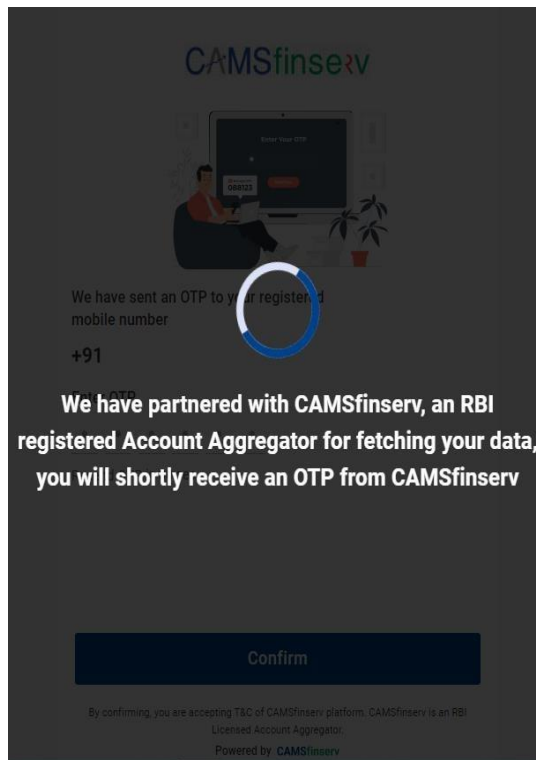
Attaching the code for your reference. FI : AA00022222(UAT) AA00022277(PROD)



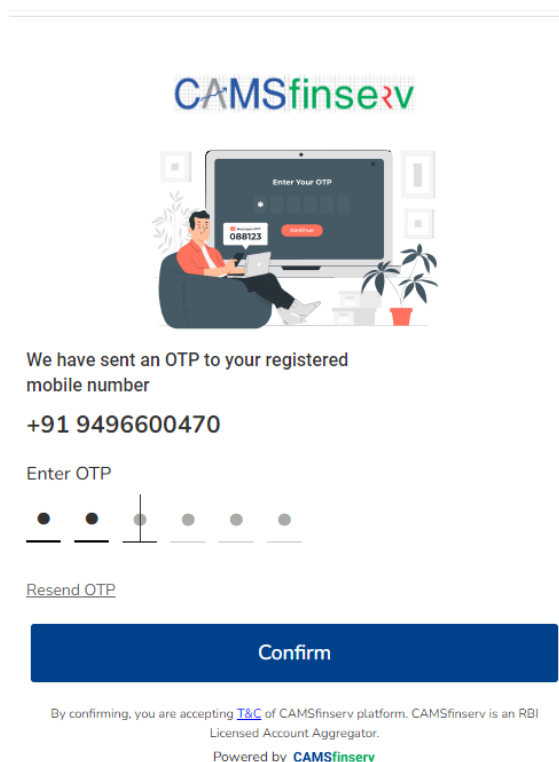
decrypt.txt

Redirection to AA site for consent Approval

Once after code snippet gets executed, the following window with AA site will open over FIU's site and the user will get redirected to the CAMSFinserve WebView link as follows: -

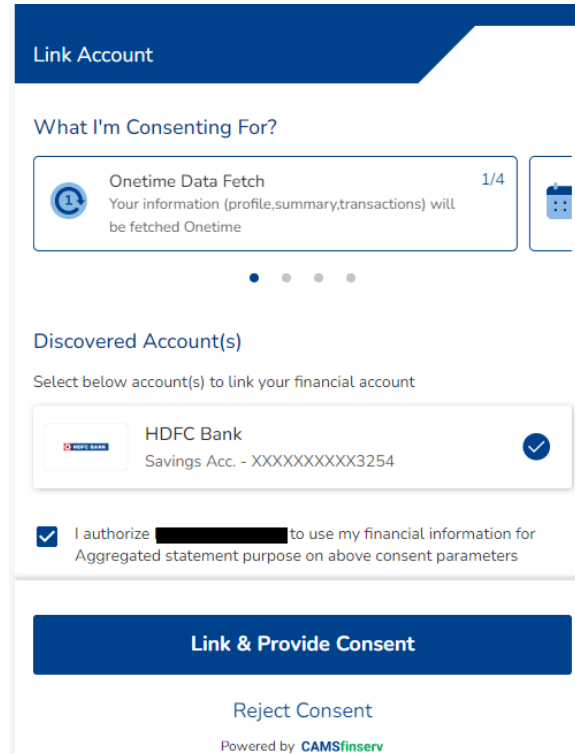


All users whether it's a new user or an existing user all will go through the same flow. User will be verified with a single OTP from CAMS end.



Restrict only one FIP and one mobile number (using fipid: "HDFC" , addfip : "False")

Once the user enters the OTP send by CAMSfinserv, they will be taken to the below page with pre discovered account.



Link Account


What I'm Consenting For?

1/4

Onetime Data Fetch
Your information (profile,summary,transactions) will be fetched Onetime

Discovered Account(s)

Select below account(s) to link your financial account

 **HDFC Bank**
Savings Acc. - XXXXXXXXXX3254

☒ I authorize [redacted] to use my financial information for Aggregated statement purpose on above consent parameters

Link & Provide Consent

[Reject Consent](#)

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The user bank accounts will be pre-discovered and preselected (associated with the fipid passed) and shown to the customer. The customer can link the account with the otp from the bank. The user can also deselect any of the Account(s) before linking & providing consent.


OTP Verification

You will receive an OTP from Financial Institution

+91 9496600470

Enter OTP

Resend OTP in 26 sec

 You can manage your consent anytime by downloading **CAMSfinserv App**, available both on Play Store and App Store

Confirm

Powered by **CAMSfinserv**

Once the user enters the OTP, the FIP validates the OTP

OTP Verification

You will receive an OTP from Financial Institution


+91 9496600470

Enter OTP

Verified Successfully

[Resend OTP](#)

Validating OTP

 You can manage your consent anytime by downloading **CAMSfinserv App**, available both on Play Store and App Store

Confirm

Powered by **CAMSfinserv**

On successful validation of OTP, the consent will be successfully submitted.

OTP Verification

You will receive an OTP from Financial Institution

+91 9496600470

Enter OTP

Verified Successfully

[Resend OTP](#)

Thank you!

Consent is received successfully.

You can manage your consent anytime by downloading

You will be led to www.fintechapp.com website to continue your journey.

Confirm

Powered by CAMSfinserv

CONSENT NOTIFICATION WEBHOOK

TSP will send the Consent request status to FIU in the form of webhook. Based on the shared response, FIU can make the UI changes on their portal.

Webhook URL provided by Client should be able to consume below request object and implement the business logic appropriately

If Consent is Approved

Request Json

```
{
  "ver": "1.1.2",
  "timestamp": "2022-10-20T11:05:42.309Z",
  "purpose": "ConsentStatusNotification",
  "txnId": "4dc7af83-e39f-4121-b6ce-e4b2d4a38b3c",
  "clientTxnid": "317193ec-cbef-4f58-8ed8-cb65a45cccd8",
  "customerId": "8652117595@CAMSAA",
  "Notifier": {
    "type": "AA",
    "id": "AA00022277"
  },
  "fipld": null,
  "ConsentStatusNotification": {
    "consentId": "7bd0f6bc-3c36-4758-b0ae-7a95f1392740",
    "consentHandle": "1fa3aaea-1be0-4ec2-91d2-43daebc15c6e",
    "consentStatus": "ACTIVE"
  }
}
```

Response –

```
{
  "clientTxnid": "0b811819-9044-4856-b0ee-8c88035f8858", "timestamp": "2018-12-06T11:39:57.153Z",
  "result": "true",
  "Message": "success"
}
```

If Consent is Rejected

Request Json

```
{
  "ver": "1.1.2",
  "timestamp": "2022-10-20T11:05:42.309Z",
  "purpose": "ConsentStatusNotification",
  "txnId": "4dc7af83-e39f-4121-b6ce-e4b2d4a38b3c",
  "clientTxnid": "317193ec-cbef-4f58-8ed8-cb65a45cccd8",
  "customerId": "8652117595@CAMSA",
  "Notifier": {
    "type": "AA",
    "id": "AA00022277"
  },
  "fipld": null,
  "ConsentStatusNotification": {
    "consentId": "7bd0f6bc-3c36-4758-b0ae-7a95f1392740",
    "consentHandle": "1fa3aaea-1be0-4ec2-91d2-43daebc15c6e",
    "consentStatus": "REJECTED"
  }
}
```

Response –

```
{
  "clientTxnid": "0b811819-9044-4856-b0ee-8c88035f8858", "timestamp": "2018-12-06T11:39:57.153Z",
  "result": "true",
  "Message": "success"
}
```

If Consent is Paused

Request Json

```
{
  "ver": "1.1.2",
  "timestamp": "2022-10-20T11:05:42.309Z",
  "purpose": "ConsentStatusNotification",
  "txnId": "4dc7af83-e39f-4121-b6ce-e4b2d4a38b3c",
  "clientTxnid": "317193ec-cbef-4f58-8ed8-cb65a45cccd8",
  "customerId": "8652117595@CAMSA",
  "Notifier": {
    "type": "AA",
    "id": "AA00022277"
  },
  "fipld": null,
  "ConsentStatusNotification": {
    "consentId": "7bd0f6bc-3c36-4758-b0ae-7a95f1392740",
    "consentHandle": "1fa3aaea-1be0-4ec2-91d2-43daebc15c6e",
    "consentStatus": "PAUSED"
  }
}
```

Response –

```
{
  "clientTxnid": "0b811819-9044-4856-b0ee-8c88035f8858", "timestamp": "2018-12-06T11:39:57.153Z",
  "result": "true",
  "Message": "success"
}
```

If Consent is Revoked

Request Json

```
{
  "ver": "1.1.2",
  "timestamp": "2022-10-20T11:05:42.309Z",
  "purpose": "ConsentStatusNotification",
  "txnid": "4dc7af83-e39f-4121-b6ce-e4b2d4a38b3c",
  "clienttxnid": "317193ec-cbef-4f58-8ed8-cb65a45cccd8",
  "customerId": "8652117595@CAMSAA",
  "Notifier": {
    "type": "AA",
    "id": "AA00022277"
  },
  "fipld": null,
  "ConsentStatusNotification": {
    "consentId": "7bd0f6bc-3c36-4758-b0ae-7a95f1392740",
    "consentHandle": "1fa3aaea-1be0-4ec2-91d2-43daebc15c6e",
    "consentStatus": "REVOKED"
  }
}
```

Response –

```
{
  "clienttxnid": "0b811819-9044-4856-b0ee-8c88035f8858",
  "timestamp": "2018-12-06T11:39:57.153Z",
  "result": "true",
  "Message": "success"
}
```

Data Notification Webhook

- The webhook url remains the same for consent & data Push into the application.
- FIU can determine the type of request from purpose parameter in the post callback.

Based on the data you need you can opt for combination of JSON, PDF, XML or all three. All the three formats are available in encrypted as well as unencrypted format.

Request –

```
{
  "purpose": "Push_Data",
  "ver": "1.2",
  "timestamp": "2023-03-01T14:04:06.618598+00:00",
  "txnid": "8ed9c6a1-fdf6-48e9-a215-f19b1898562d",
  "clienttxnid": "04502d0c9c4b400388450c65fd01bd23",
  "customerId": "711111111@CAMSAA",
  "fipid": "",
  "daterequested": "PDF, JSON",
  "encryption": false,
  "fipname": "",
  "pan": "",
  "consentid": "f7d9bd9b-a3c0-4048-ac2a-921a3e564352",
  "maskedAccountNumber": "XXXXXXXX1111",
  "accRefNumber": "",
  "dataDetail": {
    "pdfbase64": "",
    "pdfbinary": "",
    "jsonData": {
    },
    "xmlData": "",
    "csvData": null
  }
}
```

Response –

```
{
  "clienttxnid": "04502d0c9c4b400388450c65fd01bd23",
  "timestamp": null,
  "result": "true",
  "message": "success"
}
```

We are encrypting the webhook data using AES 256 encryption mechanism where a key will be generated and shared with the client.