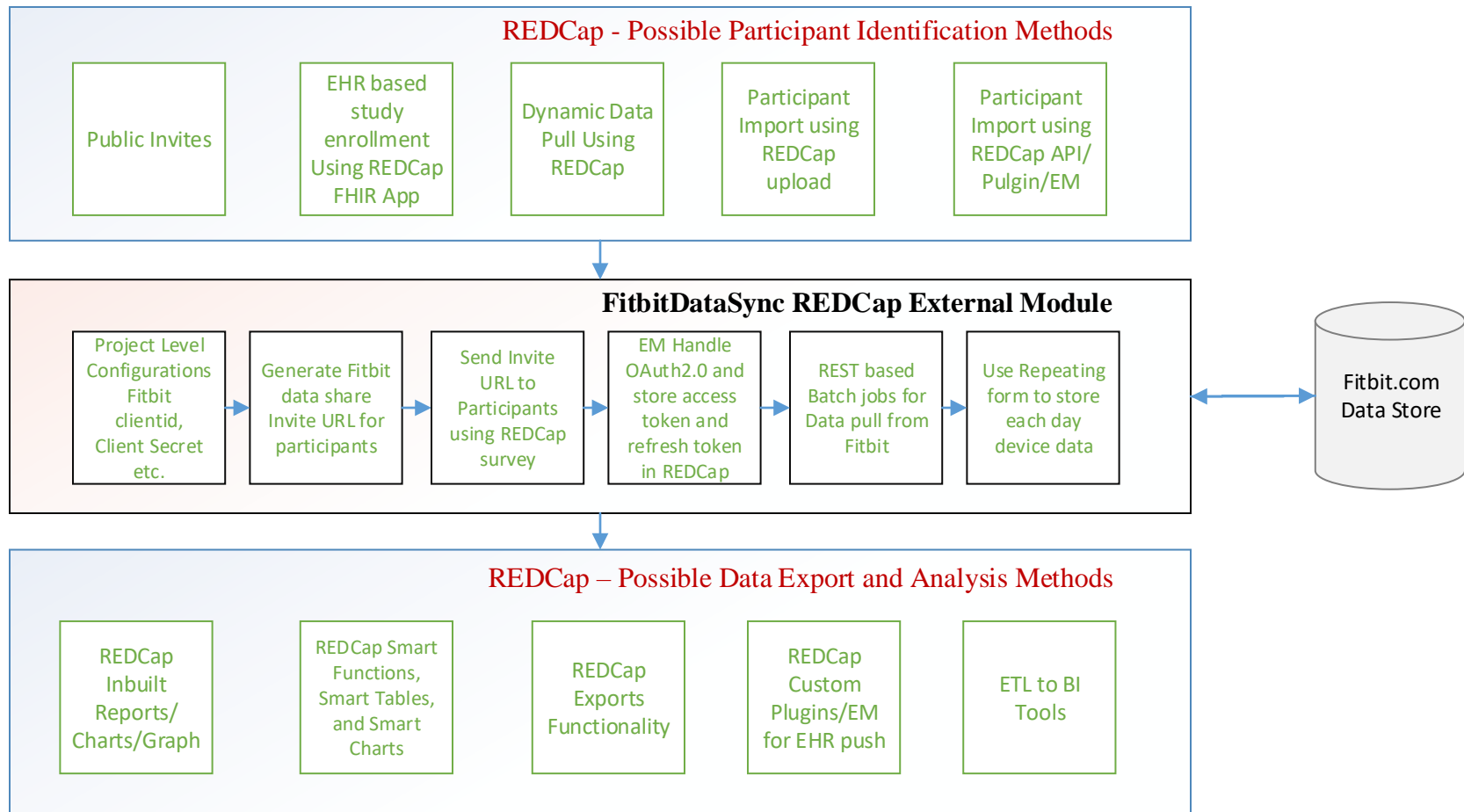


Personal Health Device Integration Approach with REDCap



Project team contact : vijayakumar.x.thirumalai@healthpartners.com

Step 1 : Register Your App at <https://dev.fitbit.com>

It should be "Server" as
External Module use
OAuth 2.0 authorization
flow

OAuth 2.0 Application Type *

☒ Server ☐ Client ☐ Personal ?

Redirect URL *

External Module Provide the Redirect URL for your project
example :
`https://{YourREDCapServer}/redcap/api/?
NOAUTH&type=module&prefix=fitbitdatasync&page=apimanager&
action=redirect&pid={YourREDCapProjectId}`

Default Access Type *

☐ Read & Write ☒ Read Only ?

Example App Registration

1

https://dev.fitbit.com/apps/edit/

dev.fitbit.com

OVERVIEW

REGISTER AN APP

MANAGE MY APPS

Edit the Application

Application Name *

TestREDCapEM

Description *

Application Website URL *

https://www.healthpartners.com/institute/

Organization *

HealthPartners

Organization Website URL *

https://www.healthpartners.com/institute/

Terms of Service URL *

https://www.healthpartners.com/hp/legal-r

Privacy Policy URL *

https://www.healthpartners.com/hp/legal-r

OAuth 2.0 Application Type *

☒ Server ☐ Client ☐ Personal

Redirect URL *

https://localhost/redcap/api/?
NOAUTH&type=module&prefix=fitbitdatasync
&page=apimanager&action=redirect&pid=14

Default Access Type *

☐ Read & Write ☒ Read Only

[Add a subscriber](#)

2

Applications I registered

[Register a new app](#)

Application TestREDCapEM

Used to integrate with REDcap Data Collection Tool

[Edit Application Settings](#)

[Delete Application](#)

[Reset Client Secret](#)

[Revoke Client Access Tokens](#)

OAuth 2.0 Client ID

22

Client Secret

e7d67a7f8074c

Redirect URL

https://localhost/redcap/api/?
NOAUTH&type=module&prefix=fitbitdatasync&page=apimanager&action=redirect&pid=14

OAuth 2.0: Authorization URI

https://www.fitbit.com/oauth2/authorize

OAuth 2.0: Access/Refresh Token Request URI

https://api.fitbit.com/oauth2/token

[OAuth 2.0 tutorial page](#)

Subscribers endpoint stats.

Subscriber ID

Verified at / Verification code

Stats

[View all applications](#)

Step 2 : Configure FitbitDataSync EM at Project Level

1

Available Modules

×

FitbitDataSync - v1.0.0

This external module facilitates fitbit device data collection from study participants

Enable

2

Configure Module: FitbitDataSync

×

Project: FitbitDataSync

Settings

Values

fitbit-client-id:

* must provide value

229

fitbit-client-secret:

* must provide value

e7d67

fitbit-auth-url:

* must provide value

https://www.fitbit.com/oauth2/authorize

fitbit-token-url:

* must provide value

https://api.fitbit.com/oauth2/token

fitbit-redirect-url:

* must provide value

https://localhost/redcap/api/?NOAUTH&i

fitbit-scope - space separated value (activity heartrate location nutrition profile settings sleep social weight) - For now 'sleep' only EM supported scope for data pull:

* must provide value

sleep

fitbit-salt key which is used to encrypt record id and handle CSRF production:

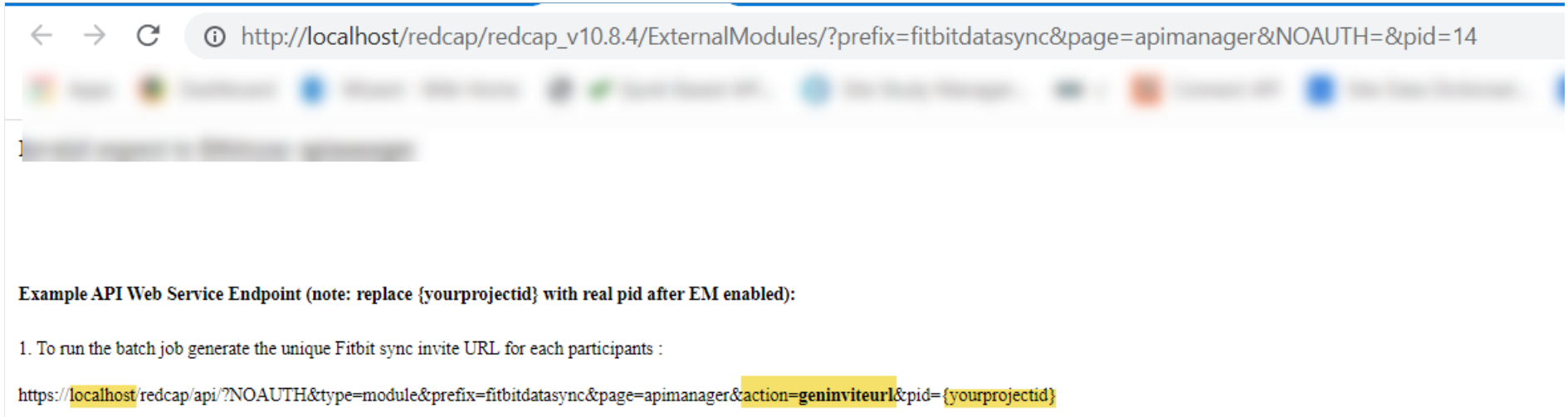
* must provide value

fbgwertasdghwq242234234

Cancel

Save

Step 3 : Run FitbitDataSync Batch Jobs to Generate Device Data Share Invite URL for Participants



The screenshot shows a web browser window with the address bar displaying the URL: `http://localhost/redcap/redcap_v10.8.4/ExternalModules/?prefix=fitbitdatasync&page=apimanager&NOAUTH=&pid=14`. The browser's address bar and tabs are visible at the top. Below the browser window, the text "Example API Web Service Endpoint (note: replace {yourprojectid} with real pid after EM enabled):" is displayed. This is followed by a numbered list item: "1. To run the batch job generate the unique Fitbit sync invite URL for each participants :". Below the list item, the API endpoint URL is shown: `https://localhost/redcap/api/?NOAUTH&type=module&prefix=fitbitdatasync&page=apimanager&action=geninviteurl&pid={yourprojectid}`. The words "localhost" and "geninviteurl" in the URL are highlighted in yellow.

Example API Web Service Endpoint (note: replace {yourprojectid} with real pid after EM enabled):

1. To run the batch job generate the unique Fitbit sync invite URL for each participants :

`https://localhost/redcap/api/?NOAUTH&type=module&prefix=fitbitdatasync&page=apimanager&action=geninviteurl&pid={yourprojectid}`

Step 4 : Send Email/Text to Participant with Device Data Share Invite URL

Insert/Edit Link

×

URL

[fitbit_invite_url]

Text to display

Fitbit Data Share

Title

[fitbit_invite_url]

Open link in...

Survey Title

Fitbit Data Sync Invite Survey

Title to be displayed to participants at the top of the survey page

Survey Instructions

(Displayed at top of survey after title)

Paragraph

B

I



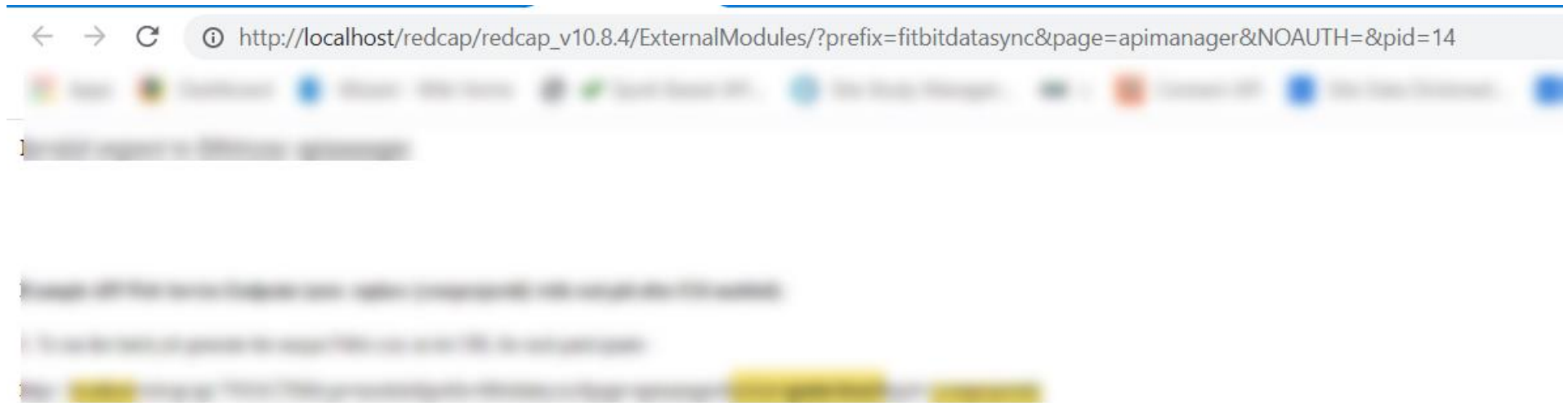
Please click the below link to share your Fitbit device data.

Thank you!

Fitbit Data Share

[fitbit_invite_url]

Step 5 : Run FitbitDataSync Batch Job everyday to get last night sleep log of the participants








2. To run get last night sleep log which pulls all the participant sleeplog from Fitbit cloud server if authorized :





`https://localhost/redcap/api/?NOAUTH&type=module&prefix=fitbitdatasync&page=apimanager&action=getlastnightsleeplog&pid={yourprojectid}`

Example Data Retrieved from Fitbit Device


Record ID 1



 Data Collection Instrument	Status
Basic Demography	
Fitbit Data Sync Invite Survey (survey)	
Sleep Data	 

Repeating Instruments

Sleep Data (2) 		
2		2021-09-15
3		2021-09-16
 Add new		

Current instance:  2 – 2021-09-15 

 Editing existing Record ID 1 (Instance #2)

Record ID	1
dateOfSleep from Fitbit	 <input type="text" value="2021-09-15"/>
Full Sleep Log Response :	<div><pre>{ "sleep": [], "summary": { "totalMinutesAsleep": 0, "totalSleepRecords": 0, "totalTimeInBed": 0 } }</pre></div> <div>Expand</div>