



goAct webservice API documentation

yourfertility.org.au (the frontend)

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General

Documents the general conventions used throughout the API.

Authentication

All access to user data in goAct is authenticated with access tokens. This chapter describes how authentication works and how access token is obtained.

Resources

User Account Resources

This chapter describes the resources for retrieving user data.

User Health Data Resources

This chapter describes the resources for retrieving user health data.

1. General

The API is initially hosted at the address "test.goact.co", and all requests require the HTTPS protocol, such that each resource address starts with **https://{subdomain}.goact.co/mint/**.

Conventions for responses

The following description applies to all URLs in the API. All resources return a HTTP 200 response code on success, otherwise an appropriate error code.

Response data is supplied in JSON format, unless otherwise noted.

Conventions for error responses

The following error case descriptions apply for all API URLs. In case of an error, a non-200 HTTP code is returned along with an error message and human readable description:

```
{
  "error" : "error_identifier_string",
  "description" : "Human readable description of the error"
}
```

Common error messages are listed in the table below. Error messages specific to particular resources are described in their own sections.

Error identifier	error	description
not_found	404	The requested resource was not found on the server
bad_request	400	The request contained invalid data (a more detailed error description may be included).
forbidden	403	The given authorization credentials were not valid for this resource. The request did not contain (correct) authorization credentials.
unsupported_api_version	410	The version of API is no longer supported. You need you notify user to upgrade the client app.
server internal error	500	The server encountered an internal error or misconfiguration and was unable to complete your request.

Http status

Common HTTP status messages are listed in the table below. Error messages specific to particular resources are described in their own sections.

Http status	description
404	The requested resource was not found on server
500	The server encountered an internal error or misconfiguration and was unable to complete your request.

Token types

The goAct backend supports two token types: application and user tokens.

1. Application tokens

Application authentication is used for requests that do not require user authentication, for example creating a new user. A token is provided in the HTTP authorization header in the following format:

```
Authorization: Application <application id>:<application secret>
```

2. User tokens

The user token is granted by the backend to each user using the flow described below. The token is provided in the request uri in following format:

```
/mint/api/v1/auth/dbd4bc88-7f44-4cd7-b9f6-06db922e36c2  
/mint/api/v1/user//info/dbd4bc88-7f44-4cd7-b9f6-06db922e36c2  
/mint/api/v1/health/dbd4bc88-7f44-4cd7-b9f6-06db922e36c2
```

2. Authorization and Authentication

The goAct API utilizes the OAuth2 as authentication protocol. In addition to standard OAuth2 username/password authentication. The backend provides the ability to authenticate as an application. For security purposes authentication information must be sent to the backend within every request in the Authorization HTTP header.

A frontend application must never store goAct username or password details.

Instead, exchange these for a unique user access token, which is used to authenticate all subsequent requests with the goAct backend.

1. User registration (POST /mint/api/v1/auth/register)

This flow is used for end user sign-up (registers) to the web app from the frontend.

Request

Authentication

Request must be authenticated by an Application specific token. goAct provides the 'ApplicationToken' for the frontend to access APIs.

Example Request

```
curl -i -H "Content-Type: application/json" -H "Authorization: ApplicationToken 1YotnFZsEjrlzCsicMWpAAFSa" -X POST -d '{"grant_type" : "signup", "firstname": "Kate", "lastname": "Smith", "username": "kc@goact.com.au", "password": "xyz"}' https://test.goact.co/mint/api/v1/auth/register
```

application/json field	Value
grant_type	signup
firstname	<i>User's first name</i>
lastname	<i>User's last name</i>
username	<i>User's username, typically the email address</i>
password	<i>User's password, passwords length should be more than 5 characters</i>

Response

Example Response

```
{  "user" : 1231,  "token_type" : "user",  "access_token" : "2YotnFZFjrlzCsicMWpAA",  "expires_in" : 3600}
```

Property	Meaning
user	Id of the associated user. This would be 'vistor id' for Analytics capture.
token_type	The token type, currently supported type is "user"
access_token	The access token to be used in URI of the requests. This token should be set to web browser for <i>expires_in</i> in order for web-tool to access to goAct APIs.
expires_in	<i>Optional</i> In how many seconds the token expires. <i>Default</i> If missing, the token is not set to expire.

If the username already exists, 'Error identifier' 403 error is returned. In this case, the client application should ask the user to sign-up with different username again or log in with same username.

Example Error Response

The following error case descriptions apply for this API URL.

```
{  "error" : "error_identifier_string",  "description" : "Human readable description of the error"}
```

HTTP Status	Error identifier	Description
200	403	The username has already existed

2. User authentication (POST /mint/api/v1/auth/authorize)

This flow is used where the end user has trusted her password with the frontend.

Request

Authentication

Request must be authenticated by Application specific token. goAct provides the 'ApplicationToken' for the frontend to access APIs .

Example Request

```
curl -i -H "Content-Type: application/json" -H "Authorization: ApplicationToken
1YotnFZsEjrlzCsicMWpAAFSa" -X POST -d '{"grant_type" : "password",
"username": "kc@goact.com.au", "password": "xyz"}'
https://test.goact.co/mint/api/v1/auth/authorize
```

application/json field	Value
grant_type	password
username	<i>User's username, typically the email address</i>
password	<i>User's password</i>

Response

Example Response

```
{
  "user" : 1231,
  "access_token" : "2YotnFZFEjrlzCsicMWpAA",
  "token_type" : "user",
  "expires_in" : 3600
}
```

Property	Meaning
user	Id of the associated user. This would be 'vistor id' for Analytics capture.
token_type	The token type, currently supported type is "user"
access_token	The access token to be used in URI of the requests. This token should be set to web browser for <i>expires_in</i> in order for web-tool to access to goAct APIs.
expires_in	<i>Optional</i> In how many seconds the token expires. If missing, the token is not set to expire.

If the token has already expired, or was otherwise cancelled, 'Error identifier' 404 error is returned. In this case, the client application should ask the user to authenticate again.

Example Error Response

The following error case descriptions apply for this API URL.

```
{
  "error" : "error_identifier_string",
  "description" : "Human readable description of the error"
}
```

HTTP Status	Error identifier	Description
200	404	The requested resource was not found on server
200	404	The password does not match, suggest reset?

3. Check user session time (GET /mint/api/v1/auth/:access_token)

Get information about the access token used in the request and extend user session time in the goAct application.

Request

Authentication

Request must be authenticated by Application specific token. goAct provides the 'ApplicationToken' for yourfertilityt.org.au to access APIs .

Example Request

```
curl -i -H "Content-Type: application/json" -H "Authorization: ApplicationToken 1YotnFZsEjrlzCsicMWpAAFSa" -X GET https://test.goact.co/mint/api/v1/auth/dbd4bc88-7f44-4cd7-b9f6-06db922e36c2
```

Response

Example Response

```
{
  "user" : 1231,
  "access_token" : "2YotnFZFEjrlzCsicMWpAA",
  "token_type" : "user",
  "expires_in" : 3600
}
```

Property	Meaning
user	Id of the associated user. This would be 'vistor id' for Analytics capture.
token_type	The token type, currently supported type is "user"

Property	Meaning
access_token	The access token to be used in URI of the requests. This token should be set to web browser for <i>expires_in</i> in order for web-tool to access to goAct APIs.
expires_in	<i>Optional</i> In how many seconds the token expires. <i>Default</i> If missing, the token is not set to expire.

If the token has already expired, or otherwise cancelled, 'Error identifier' 404 error is returned. In this case, the client application should ask the user to authenticate again.

Example Error Response

The following error case descriptions apply for this API URL.

```
{
  "error" : "error_identifier_string",
  "description" : "Human readable description of the error"
}
```

HTTP Status	Error identifier	Description
200	400	The request contained invalid or expried 'access token' (a more detailed error description may be included).
200	404	The requested resource was not found on server

4. User request new password (POST /mint/api/v1/auth/request_new_password)

This flow is used when the end user requests a new password from the frontend .

Request

Authentication

Request must be authenticated by Application specific token. goAct provides the 'ApplicationToken' for the frontend to access APIs .

Example Request

```
curl -i -H "Content-Type: application/json" -H "Authorization: ApplicationToken
1YotnFZsEjrlzCsicMWpAAFSa" -X POST -d '{"grant_type" : "reset",
"username":"aaa9@goact.com.au"}'
https://test.goact.co/mint/api/v1/auth/request_new_password
```

application/json field	Value
grant_type	reset
username	User's username, typically the email address

Response

Example Response

```
{
  "user" : 1231,
  "access_token" : "2YotnFZFEjrlzCsicMWpAA",
  "token_type" : "user",
  "sent" : true
}
```

Property	Meaning
user	Id of the associated user. This would be 'vistor id' for Analytics capture.
token_type	The token type, currently supported type is "user"
access_token	The access token to be used in URI of the requests. This token should be set to web browser for <i>expires_in</i> in order for web-tool to access to goAct APIs.
sent	Email sent. If false, the server encountered an unexpected error while sending email.

If the username doesn't exist, 'Error identifier ' 404 error is returned. In this case, the client application should ask the user to enter correct username again.

Example Error Response

The following error case descriptions apply for this API URL.

```
{
  "error" : "error_identifier_string",
  "description" : "Human readable description of the error"
}
```

HTTP Status	Error identifier	Description
200	404	The requested resource was not found on the server

3. User Account Resources

1. Attain Visitor ID (GET /mint/api/v1/user/visitorId)

Return the unique visitor ID for anonymous user. This would be 'ID' for Analytics capture.

Request

Authentication

Request must be authenticated by Application specific token. goAct provides the 'ApplicationToken' for the frontend to access APIs .

Example Request

```
curl -i -H "Content-Type: application/json" -H "Authorization: ApplicationToken 1YotnFZsEjrlzCsicMWpAAFSa" -X GET https://test.goact.co/mint/api/v1/user/visitorId
```

Response

Example Response

```
{
  "visitorid" : "dbd4bc88-7f44-4cd7-b9f6-06db922e36c2"
}
```

Fields

Fields that belong to the user account

Field	Description
visitorid	User's visitor ID Must not be null

Example Error Response

The following error case descriptions apply for this API URL.

```
{
  "error" : "error_identifier_string",
  "description" : "Human readable description of the error"
}
```

HTTP Status	Error identifier	Description
200	404	The requested resource was not found on server
200	403	The given authorization credentials were not valid for this resource. The request did not contain (correct) authorization credentials.
200	500	The server encountered an internal error or misconfiguration and was unable to complete your request.

2. Access User profile (GET /mint/api/v1/user/info/:access_token)

Return the current user profile data.

Request

Authentication

Request must be authenticated by Application specific token. goAct provides the 'ApplicationToken' for the frontend to access APIs .

Example Request

```
curl -i -H "Content-Type: application/json" -H "Authorization: ApplicationToken
1YotnFZsEjrlzCsicMWpAAFSa" -X GET
https://test.goact.co/mint/api/v1/user/dbd4bc88-7f44-4cd7-b9f6-06db922e36c2
```

Response

Example Response

```
{
  "username" : "kc@goact.com.au",
  "firstname" : "Kate",
  "lastname" : "Smith",
  "date_of_birth" : "1981-03-05",
  "sex" : "male",
  "weight" : 65.5,
  "height" : 169.0,
  "created" : 1371472503.646541,
  "updated" : 1371492826.623422
}
```

If the field value is not set, it is **null**.

Fields

Fields that belong to the user account

Field	Description
username	User's email address. Must not be null
firstname	User's firstname.
lastname	User's lastname.
date_of_birth	<i>Optional</i> User's date of birth.
sex	<i>Optional</i> Biological sex. Choises are "M", "F", and null.
weight	<i>Optional</i> Weight in kilograms
height	<i>Optional</i> Height in centimeters
created	Timestamp of user creation
updated	Timestamp of user profile update

Example Error Response

The following error case descriptions apply for this API URL.

```
{
```

```
"error" : "error_identifier_string",
"description" : "Human readable description of the error"
}
```

HTTP Status	Error identifier	Description
200	404	The requested resource was not found on server
200	400	The request contained invalid data (a more detailed error description may be included).
200	403	The given authorization credentials were not valid for this resource. The request did not contain (correct) authorization credentials.
200	500	The server encountered an internal error or misconfiguration and was unable to complete your request.

3. Update User profile (PUT /mint/api/v1/user/info/:access_token)

Update all or some of the fields in user profile.

Request

The data to update is sent in request body in JSON format, as in the PUT request. id, username, created, and updated fields are ignored, if present. Fields can be removed (cleared) by setting a field value to null in the request.

Authentication

Request must be authenticated by Application specific token. goAct provides the 'ApplicationToken' for the frontend to access APIs .

Example Request

```
curl -i -H "Content-Type: application/json" -H "Authorization: ApplicationToken 1YotnFZsEjrlzCsicMWpAAFSa" -X PUT -d '{"firstname":"Kate", "lastname":"Smith", "date_of_birth":"1981-03-05", "sex":"male", "weight" : 65.5, "height" : 169.0, "password": "newpaswd!23"}' https://test.goact.co/mint/api/v1/user/dbd4bc88-7f44-4cd7-b9f6-06db922e36c2
```

Response

Fields that are requested will be returned. Returns the updated user profile, see PUT request.

Example Response

```
{
  "username" : "kc@goact.com.au",
  "firstname" : "Kate",
  "lastname" : "Smith",
```

```
"date_of_birth" : "1981-03-05",
"sex" : "male",
"weight" : 65.5,
"height" : 169.0,
"created" : 1371472503.646541,
"updated" : 1371492826.623422
}
```

If the field value is not set, it is **null**.

Fields

Fields that belong to the user account

Field	Description
username	<i>Optional</i> User's email address. Must not be null
firstname	<i>Optional</i> User's firstname.
lastname	<i>Optional</i> User's lastname.
date_of_birth	<i>Optional</i> User's date of birth.
sex	<i>Optional</i> Biological sex. Choices are "M", "F", and null.
weight	<i>Optional</i> Weight in kilograms
height	<i>Optional</i> Height in centimeters
password	<i>Optional</i> new password to change. Minimum length is 6. The client app should confirm that new password is correct by double checking.
created	Timestamp of user creation
updated	Timestamp of user profile update

Example Error Response

The following error case descriptions apply for this API URL.

```
{
  "error" : "error_identifier_string",
  "description" : "Human readable description of the error"
}
```

HTTP Status	Error identifier	Description
200	404	The requested resource was not found on server
200	400	The request contained invalid data (a more detailed error description may be included).
200	403	The given authorization credentials were not valid for this resource. The request did not contain (correct) authorization credentials.
200	500	The server encountered an internal error or misconfiguration and was unable to complete your request.

4. User Health Data Resources

1. POST /mint/api/v1/user/health/:visitor_id

Store Personal Health Information (PHI) fields into the goAct database. This api should be called when a user has logged in.

Authentication

Request must be authenticated by an Application specific token.

Example Request

```
curl -i -H "Content-Type: application/json" -H "Authorization: ApplicationToken 1YotnFZsEjrlzCsicMWpAAFSa" -X POST -d '{"accessType" : "add","accessToken" : "51b946bac50f459051f85713d716cb07", "firstName" : "Firstname", "lastName" : "Lastname", "age" : 33, "sex" : "F", "height" : 178, "weight" : 75, "bmi" : 75, "smoking" : 75, "alcoholConsumption" : 75 , "conceiveTry" : 75, "conceiveTryMonthly" : 75, "healthyBaby" : true, "sti" : true, "stiPositive" : false, "menstruation" : true, "havingSex" : 10, "havingSexMultiple" : 'unsure', "contraception" : true, "medicalConditions" : ["Diabetes","Endometriosis"]} 'https://test.goact.co/mint/api/v1/health/dbd4bc88-7f44-4cd7-b9f6-06db922e36c2
```

Example Response 1 if user health information has already been added.

```
{
  "accessType" : "add",
  "accessToken" : "51b946bac50f459051f85713d716cb07",
  "age" : 33,
  "sex" : "F",
  "height" : 178,
  "weight" : 75,
  "bmi" : 75,
  "smoking" : 75,
  "alcoholConsumption" : 75 ,
  "conceiveTry" : 75,
  "conceiveTryMonthly" : 75,
  "healthyBaby" : true,
  "sti" : true,
  "stiPositive" : false,
  "menstruation" : true,
  "havingSex" : 10,
  "havingSexMultiple" : 'unsure',
  "contraception" : true,
  "medicalConditions" : ["Diabetes","Endometriosis"]
}
```

Example Response 2 if user hasn't been added .

```
{
```

```
"error" : "500",  
"description" : "The server encountered an unexpected error"  
}
```

If the field value is not set, it is **null**.

Fields

Fields that belong to the user account

Field	Description
accessType	'new' or 'add'. Must not be null . new - for new visitor who has no cookie. add - for visitor who has cookie or logged in user.
accessToken	goAct access token for this user. Must not be null if accessType is 'add'. Response Must not be null . For anonymous user it should be set with visitor ID
age	<i>Optional</i> User's age.
sex	<i>Optional</i> Biological sex. Choices are "M" for male, "F" for female or null.
weight	Weight in kilograms
height	Height in centimeters
smoking	Response for Cigarettes per day.
alcoholConsumption	Response for Standard drinks per week.
conceiveTry	Response for Are you trying to conceive?.
conceiveTryMonthly	<i>Optional</i> Response for How many months have you been trying to conceive?
healthyBaby	Response for Have you previously had a healthy baby?
sti	Response for Have you been tested for Sexually Transmitted Infections (STI)?
stiPositive	<i>Optional</i> Response for Did you test positive for an STI?
menstruation	<i>Optional</i> Response for Are you having fewer than 9 menstrual cycles per year or menstrual cycles longer than 35 days?
havingSex	Response for How often you have sex during a given month?
havingSexMultiple	Response for Are you having sex multiple times at the right time of the month?
contraception	Response for Are you currently using contraception?
contraception	Response for Do you have any of the following medical conditions?

2. GET /mint/api/v1/user/health/:access_token

Fetch Personal Health Information (PHI) fields from the goAct database. This API should be called when a user is logged in.

Authentication

Request must be authenticated by Application specific token.

Example Request

```
curl -i -H "Content-Type: application/json" -H "Authorization: ApplicationToken"
```

```
1YotnFZsEjrlzCsicMWpAAFSa" -X GET
https://test.goact.co/mint/api/v1/health/dbd4bc88-7f44-4cd7-b9f6-06db922e36c2
```

Example Response 1 if user has previous health information in the goAct database.

```
{
  "accessToken" : "51b946bac50f459051f85713d716cb07",
  "factors" : [
    { "added" : "2017-02-21 13:34:23",
      "age" : 33,
      "sex" : "F",
      "height" : 178,
      "weight" : 75,
      "bmi" : 23.5,
      "smoking" : 75,
      "alcoholConsumption" : 75 ,
      "conceiveTry" : 75,
      "conceiveTryMonthly" : 75,
      "healthyBaby" : true,
      "sti" : true,
      "stiPositive" : false,
      "menstruation" : true,
      "havingSex" : 10,
      "havingSexMultiple" : 'unsure',
      "contraception" : true,
      "medicalConditions" : ["Diabetes","Endometriosis"] },
    { "added" : "2017-05-21 13:34:23",
      "age" : 33,
      "sex" : "F",
      "height" : 178,
      "weight" : 77,
      "bmi" : 29.2,
      "smoking" : 75,
      "alcoholConsumption" : 35 ,
      "conceiveTry" : 55,
      "conceiveTryMonthly" : 25,
      "healthyBaby" : true,
      "sti" : true,
      "stiPositive" : false,
      "menstruation" : true,
      "havingSex" : 20,
      "havingSexMultiple" : 'unsure',
      "contraception" : true,
      "medicalConditions" : ["Diabetes"] }}
  ]
}
```

Example Response 2 if user doesn't have previous health information in the goAct database yet.

```
{
  "accessToken" : "51b946bac50f459051f85713d716cb07"
}
```

If the field value is not set, it is **null**.

Fields

Fields that belong to the user account

Field	Description
accessToken	goAct access token for this user. Must not be null .
added	<i>Optional</i> date added (YYYY-MM-DD HH:MM:SS).
age	<i>Optional</i> User's age.
sex	<i>Optional</i> Biological sex. Choices are "M" for male, "F" for female or null.
weight	<i>Optional</i> Weight in kilograms
height	<i>Optional</i> Height in centimeters
smoking	Response for Cigarettes per day.
alcoholConsumption	Response for Standard drinks per week.
conceiveTry	Response for Are you trying to conceive?.
conceiveTryMonthly	<i>Optional</i> Response for How many months have you been trying to conceive?
healthyBaby	Response for Have you previously had a healthy baby?
sti	Response for Have you been tested for Sexually Transmitted Infections (STI)?
stiPositive	<i>Optional</i> Response for Did you test positive for an STI?
menstruation	<i>Optional</i> Response for Are you having fewer than 9 menstrual cycles per year or menstrual cycles longer than 35 days?
havingSex	Response for How often are you have sex during a given month?
havingSexMultiple	Response for Are you having sex multiple times at the right time of the month?
contraception	Response for Are you currently using contraception?
contraception	Response for Do you have any of the following medical conditions?

Rule for visitor_id

When communicating with goAct api, it must use visotor_id from analytics tool cookie.