

# Immunetworks API Documentation

{BASEURL} : c813ur0lif.execute-api.us-east-1.amazonaws.com

## Login User API

### Endpoint

- Method: POST
- URL : `https://{BASEURL}/dev/login`

### Description

This endpoint allows users to log in and obtain authentication tokens.

### Request

- Headers: No headers required
- Body:

```
{
  "username": "<your_username>",
  "password": "<your_password>",
  "request": "LOGIN"
}
```
- username: Your username for authentication.
- password: Your password for authentication.
- request: Indicates the type of request, which should be set to "LOGIN".

### Response

- Status Code: 200
- Body:

```
{
  "ChallengeParameters": {},
  "AuthenticationResult": {
    "AccessToken": "<access_token>",
    "ExpiresIn": 3600,
    "TokenType": "Bearer",
    "RefreshToken": "<refresh_token>",
    "IdToken": "<id_token>"
  },
  "ResponseMetadata": {
    "RequestId": "<request_id>",
    "HTTPStatusCode": 200,
    "HTTPHeaders": {
      "date": "Mon, 08 Apr 2024 22:46:07 GMT",
      "content-type": "application/x-amz-json-1.1",
      "content-length": "3963",
      "connection": "keep-alive",
      "x-amzn-requestid": "<amazon_request_id>"
    },
    "RetryAttempts": 0
  }
}
```
- ChallengeParameters: Additional challenge parameters if any.
- AuthenticationResult: Contains authentication tokens.
  - AccessToken: Token for accessing protected resources.

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- ExpiresIn: Time until the access token expires (in seconds).
- TokenType: Type of token (e.g., Bearer).
- RefreshToken: Token used to obtain a new access token when it expires.
- IdToken: Token containing user identity information.
- ResponseMetadata: Metadata about the response.
  - RequestId: Unique identifier for the request.
  - HTTPStatusCode: HTTP status code of the response.
  - HTTPHeaders: Headers sent in the response.
  - RetryAttempts: Number of retries attempted.

## Signup User API

### Endpoint

- Method: POST
- URL: `https://{BASEURL}/dev/identityadd`

### Description

This endpoint allows users to sign up and create a new account.

### Request

- Headers: No headers required
- Body:

```
{
  "resourceName": "/identityadd",
  "httpMethod": "POST",
  "email": "<user_email>",
  "password": "<user_password>",
  "username": "<user_username>"
}
```

  - resourceName: The resource name for the API request.
  - httpMethod: The HTTP method used for the request.
  - email: The email address of the new user.
  - password: The password for the new user.
  - username: The username for the new user.

## Refresh User Login API

### Endpoint

- Method: POST
- URL: `https://{BASEURL}/dev/login`

### Description

This API allows users to refresh their login using a refresh token.

### Request

- Headers: No headers required
- Body:

```
{
  "request": "REFRESH",
  "REFRESH_TOKEN": "<refresh_token_from_login_response>"
}
```

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}

- request: Indicates the type of request, set to "REFRESH".
- REFRESH\_TOKEN: The refresh token obtained from the previous login response.

## Response

- Status Code: 200
- Body:

```
{
  "statusCode": 200,
  "body": {"ChallengeParameters": {}},
  "AuthenticationResult": {
    "AccessToken": "<access_token>",
    "ExpiresIn": 3600,
    "TokenType": "Bearer",
    "RefreshToken": "<refresh_token>",
    "IdToken": "<id_token>"
  },
  "ResponseMetadata": {
    "RequestId": "<request_id>",
    "HTTPStatusCode": 200,
    "HTTPHeaders": {
      "date": "Mon, 08 Apr 2024 22:46:07 GMT",
      "content-type": "application/x-amz-json-1.1",
      "content-length": "3963",
      "connection": "keep-alive",
      "x-amzn-requestid": "<amazon_request_id>"
    },
    "RetryAttempts": 0
  }
}
```
- ChallengeParameters: Additional challenge parameters if any.
- AuthenticationResult: Contains refreshed authentication tokens.
  - AccessToken: Token for accessing protected resources.
  - ExpiresIn: Time until the access token expires (in seconds).
  - TokenType: Type of token (e.g., Bearer).
  - RefreshToken: Token used to obtain a new access token when it expires.
  - IdToken: Token containing user identity information.
- ResponseMetadata: Metadata about the response.
  - RequestId: Unique identifier for the request.
  - HTTPStatusCode: HTTP status code of the response.
  - HTTPHeaders: Headers sent in the response.
  - RetryAttempts: Number of retries attempted.

## Get All Users API

### Endpoint

- Method: GET
- URL: `https://{BASEURL}/dev/user_runs`

### Description

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This endpoint retrieves a list of all signed-up users.

## Request Headers

- Authorization: <your\_id\_token>

## Response

- Status Code: 200
- Body:

```
{
  "statusCode": 200,
  "body": [
    "user1@example.com",
    "user2@example.com",
    "user3@example.com",
    "user4@example.com",
    "user5@example.com"
  ]
}
```

## Response Explanation

- The response body contains an array of email addresses belonging to all signed-up users.

## Create New Runs API

### Endpoint

- Method: POST
- URL: https://{BASEURL}/dev/runs\_update

### Description

This endpoint allows the creation of new runs.

### Request Headers

- Authorization: <your\_id\_token>

### Request Body

- Content Type: application/json
- Body:

```
{
  "Name": "Meshnet_GWlabels",
  "Description": "GWlabels",
  "Users": ["user1@example.com", "user2@example.com"],
  "check_Threshold": 4,
  "Classes": 3
}
```

  - Name: Name/Description of the run ID.
  - Description: Description of the run ID.
  - Users: List of signed-up users who will be participating in the computation.
  - check\_Threshold: Maximum wait time for each user to get gradients.
  - Classes: Number of classes Meshnet is being trained on.

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## Get All User Runs API

### Endpoint

- Method: POST
- URL: `https://{BASEURL}/dev/runs`

### Description

This endpoint retrieves all user runs.

### Request Headers

- Authorization: `<your_id_token>`

### Response

- Status Code: 200
- Body:

```
{
  "statusCode": 200,
  "body": {
    "3": {
      "description": "training meshnet from scratch for 3 classes",
      "name": "final training ",
      "users": [
        "user1@example.com",
        "user2@example.com"
      ],
      "classes": 3
    },
    "1": {
      "description": "refvkmeflmkmmfckmklfcmkmdkvmkmfv",
      "name": "testing",
      "users": [
        "user1@example.com",
        "user2@example.com"
      ],
      "classes": 3
    }
  }
}
```
- The response body contains a JSON object where each key represents a run ID and its corresponding value contains details about the run, such as description, name, users, and classes.

## User Activation API

### Endpoint

- Method: POST
- URL: `https://{BASEURL}/dev/activate`

### Description

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This endpoint is used to activate or deactivate a user before or after initiating a run.

## Request Headers

- Authorization: <your\_id\_token>

## Request Body

- Content Type: application/json
- Activate User Example:

```
{
  "activate": 1,
  "runid": 1
}
```

  - activate: Set to 1 to activate the user.
  - runid: ID of the run.
- Deactivate User Example:

```
{
  "activate": 0,
  "runid": 1
}
```

  - activate: Set to 0 to deactivate the user.
  - runid: ID of the run.

## Upload Weights API

### Endpoint

- Method: POST
- URL: https://{BASEURL}/dev/weights

### Description

This endpoint is used to upload weights from a model to a specified runid.

## Request Headers

- Authorization: <your\_id\_token>

## Request Body

- Content Type: application/json
- Parameters:
  - runid: ID of the run to which weights are uploaded.
  - weights: JSON object containing the weights from the model.

## Request Example

```
{
  "runid": "1",
  "weights": {
    "model.0.0.weight": [
      [
        [
```

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```
[SENSITIVE_DATA_HIDDEN]  
],
```

```
...  
}  
}
```

## Get Average Weights API

### Endpoint

- Method: POST
- URL: <https://{BASEURL}/dev/weightsavg>

### Description

This endpoint is used to retrieve the average weights for a specified runid.

### Request Headers

- Authorization: <your\_id\_token>

### Request Body

- Content Type: application/json
- Parameters:
- runid: ID of the run for which average weights are requested.

### Request Example

```
{  
  "runid": "1"  
}
```

Upload Gradients API

### Endpoint

- Method: POST
- URL: <https://{BASEURL}/dev/results>

### Description

This endpoint is used to upload gradients to a specific run the user is working on.

### Request Headers

- Authorization: <your\_id\_token>

### Request Body

- Content Type: application/json
- Parameters:
  - runid: ID number of the specified run.
  - gradients: Gradients from the model as a string.

### Request Example

```
{  
  "runid": "1",  
  "gradients": "[...]" // Gradients string  
}
```

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## Get Average Gradients API

### Endpoint

- Method: POST
- URL: `https://{BASEURL}/dev/agggrad`

### Description

This API retrieves the average weights for a specified run ID collected from all users.

### Request Headers

- Authorization: `<your_id_token>`

### Request Body

- Content Type: `application/json`
- Parameters:
  - `runid`: ID number of the specified run.

### Request Example

```
{
  "runid": "1"
}
```