Sample API GuIDE

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Only for Reference

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# **Server API**

The Server API is a REST API Service used for provisioning and reporting requirements of your application. The API Service is also required to manage Rooms, request tokens, and obtain usage reports post-RTC session.

Server API, a REST API Service, is the single-entry point to access xxx services. The Server API is used for provisioning, requesting a token to start the WebRTC session and post-session reporting.

**Overview**

The Server API is for server-to-server calling only. This means the application server can only make server API calls; Client Endpoints' requests will be denied.

Some applications may require a provisioning request, from the Client Endpoint, using your own service API. In this case, the Application Server can

1. use a Server API Call to request xxx Platform.
2. process responses received.

**Types of APIs**

The xxx platform provides a collection of APIs.

| **APIs** | **Description** |
| --- | --- |
| Room Management | These APIs are provisioning and media session APIs. They are used for room and token-related tasks. |
| Media Session | This API gives you an access token for any Client End Point to join an RTC session on the xxx Platform. |
| Get Dial-In Number | This API gives you a list of Dial-In phone numbers |
| Post–Session Reporting | These APIs give you the Call Detail Report for any WebRTC session and recordings and chat scripts for any WebRTC session |

## **API Host URL**

The API Host URL is the base URL used to access a web service's application programming interface (API). It is used to identify the location of the API and enables the application to make requests to the API and receive responses.

**Sever API Host** - <https://api.xxx.io/video/>

Every major version release of the Server API has a sub-directory, named after its major version number. This is the **Base URL** for the Server API Version.

**For example**

* **Version Base URL** - <https://api.xxx.io/video/v2/>

Here, all Server API Routes are mapped to this Version Base URL

* **Rooms Route URL** - <https://api.xxx.io/video/v2/rooms>

## **API Authentication**

The Server API uses the HTTP Basic Authentication mechanism to authenticate API calls. Each API call is validated via the authentication header.

The Server API for your Application is accessed using your:

* **Application ID** or **APP\_ID** as username
* **Application Key** or **APP\_KEY** as Password

HTTP basic authentication header in the API call request



The **Authorization** header above contains a value **XXXXX**, which is a base64 encoded string of the **APP\_ID: APP\_KEY**.

**How to get APP\_ID and APP\_KEY?**

1. Log in to **xxx Portal**.

Note: If you do not have an account, **sign up here**.

1. Click **CREATE PROJECT** and enter the Project Details.
2. Toggle to enable the **Video** option in the **Capabilities** section.
3. Click **CREATE PROJECT**. A pop-up dialogue box appears.
4. Click **GET STARTED** on the pop-up dialogue box. A form **Choose your preferred method of development** appears.
5. Under **I want to Code**, click **Start with APIs**.
6. Under **App ID/Key**, click **SEND APP CREDENTIALS** to send the credentials to your registered email address.
7. Use this ***App ID*** and ***App Key*** in your Application Server for API Calls.

Once your Project is created, you will receive an email with the Project’s Access Credentials, that is **APP\_ID** and **APP\_KEY**.

## **API Responses**

The Server API calls make use of JSON Result Code to determine if the API call is successful.

### **Success JSON**

Successful Server API calls will always return JSON with a 0 (zero) Result Code.



### **Error JSON**

If unsuccessful, for whatever reason, Server API calls will return JSON with a non—zero Result Code. This error response will always carry 3 keys, viz.

\* Result Code,

\* Error,

\* Description.

See the example below:



### **Result Code Groups**

The Result Codes of Server API are grouped into 5 categories as shown in the table below:

| **Code** | **Category** | **Description** |
| --- | --- | --- |
| 1xx | Information | Request received & processed |
| 2xx | Success | Request received & accepted |
| 3xx | Redirection | Action required to complete Request |

# **Create Token**

A token is required for any Client End Point to join an RTC session on the xxx Platform. The token has the following characteristics:

### **Characteristics of a Token**

* A token is created only for a specific Room-ID.
* The token decides your role within a session, i.e., Moderator, Participant or Viewer.
  + **Moderator**: The organiser with additional control over the session, i.e. start/stop recording, hard mute/unmute room, drop/eject participant from the room, and end the session.
  + **Participant**: A user that can access and interact in all media streams.
  + **Viewer**: A user that can access all media streams and chat, but cannot interact.
* Tokens are transactional. Every time you want to connect to the same room, you need a new token.
* A token can be used only once.
* The token must be used, within its 15-minute lifetime, to connect to a Room.
* A token may be created at any time for a permanent meeting room.
* A token must be created, 15 minutes prior to the scheduled start time, for a Scheduled Meeting Room.

### **Request**

This API call allows developers to create a token that can be used to connect to a meeting room.

**Method:** POST

**Authorization:** Basic XXXXXXX

**URL:** [https://api.xxx.io/video/v2/rooms/{room\_id}/tokens](https://api.xxx.io/video/v2/rooms/%7broom_id%7d/tokens)

**Headers:**

| **Header** | **Description** | **Value** |
| --- | --- | --- |
| Content-Type | Format for request Data | application/JSON |

**JSON Raw Body Payload on Request**

| **Parameter** | **Description** | **Required** | **Type** | **Note** |
| --- | --- | --- | --- | --- |
| name | Name of the user who is creating a token to join the session | Yes | Alpha Numeric |  |
| role | Role of User | Yes | String | Enumerated Values: moderator, participant, the viewer (All in lowercase). |
| user\_ref | User ID or Reference. | Yes | Alpha Numeric | You may use it from your Information System. |
| data | It’s a custom data object that you can pass. | No | String | You may use it from your Information System |

**Sample Request**



### **Response**

The xxx server responds with JSON containing a unique token.

| **Element** | **Description** | **Type** |
| --- | --- | --- |
| result | Success or failure, a result of token creation | Boolean |
| token | Token created for specific room ID | String |

**Sample Response**



# **Create Meeting Room Using Rest API**

**Create a Room to get Room ID**

To create a Meeting Room URL, you first need to create a Room and fetch the Room ID. You can create a room using server API and the XXX responds with the JSON Payload containing the unique “room-id”. There are three different types of Meeting Rooms that can be created: Permanent, Scheduled, and Ad-hoc.

**Permanent Room**

It is a meeting room that always remains available for use once created. You can start it anytime and schedule it for further use in the future. Use the following Settings in JSON Payload for API Call to create a Permanent Room:

**{"settings": {"scheduled": false, "adhoc": false}}**

**API Call to create Permanent Room**

### **Request**

This API call allows developers to create a permanent room that can be used for communication and collaboration purposes. The room will be stored permanently in the database and will be accessible for use by other users.

**Method**: **POST**

**Authorization**: Basic XXXXXXXX

**URL**: <https://api.xxx.io/video/v1/rooms>

**Headers**

| **Header** | **Description** | **Value** |
| --- | --- | --- |
| Content-Type | Format for request Data | application/JSON |

**POST Body**

| **Element** | **Description** | **Type** | **Required** |
| --- | --- | --- | --- |
| name | Name of the meeting room | String |  |
| owner\_ref | Reference of the owner | String |  |
| settings | Settings adjusted for the created meeting room | JSON Object |  |
| description | Description of the newly created meeting room | String |  |
| mode | Mode of the meeting room | String |  |
| scheduled | Indicates, whether the meeting has been scheduled or not | Boolean |  |
| adhoc | Indicates, the meeting room is an ad-hoc or permanent | Boolean |  |
| duration | Duration of the scheduled meeting | number |  |
| moderators | Number of moderators in a meeting room | String |  |
| participants | Number of participants other than moderators in a meeting room | String |  |
| quality | Quality of the streaming of the meeting | String |  |
| canvas | Indication, canvas streaming enables or not | Boolean |  |
| screen\_share | Indication, screen share enables or not | Boolean |  |
| abwd | This is available bandwidth. | Boolean |  |
| max\_active\_talkers | Maximum active talkers in a meeting room | Number |  |

**Sample Request**



**Response**

The xxx server responds with JSON containing a unique room-id.

| **Element** | **Description** | **Type** |
| --- | --- | --- |
| result | Success or failure, the result of room creation | Boolean |
| room | Information about the created room | JSON Object |
| name | Name of the created Room | String |
| owner\_ref | Reference of the owner | String |
| settings | Settings of the newly created room | JSON Object |
| scheduled | Indicates, whether the meeting has been scheduled or not | Boolean, Default value is false. |
| adhoc | Indicates, the meeting room is an ad-hoc or permanent | Boolean, Default value is false. |
| created | Status of the created meeting room | String |
| room-id | ID of the newly created meeting room | String |

**Sample Response**



**Scheduled Room**

This Room is only available for a particular duration/period that needs to be specified with a scheduled time and duration. Use the following Settings in JSON Payload for API Call to create a Scheduled Room:

{"settings": {"scheduled": true, "scheduled time": "YYYY-MM-DD HH:II:SS", "duration": 30}}

Note: The *scheduled time* here is in GMT.

**API Call to create Scheduled Room**

**Method**: POST

**Authorization**: Basic XXXXXXXX

**URL**: <https://api.xxx.io/video/v1/rooms>

**Headers**

| **Header** | **Description** | **Value** |
| --- | --- | --- |
| Content-Type | Format for request Data | application/JSON |

**POST Body**

| **Element** | **Description** | **Type** | **Required** |
| --- | --- | --- | --- |
| name | Name of the meeting room | String |  |
| owner\_ref | Reference of the owner | String |  |
| settings | Settings adjusted for the created meeting room | JSON Object |  |
| description | Description for the newly created meeting room | String |  |
| mode | Mode of the meeting room | String |  |
| scheduled | Indicates, meeting has been scheduled or not. | Boolean |  |
| adhoc | Indicates, the meeting room is adhoc or permanent | Boolean |  |
| duration | Duration of the scheduled meeting | number |  |
| moderators | Number of moderators in a meeting room | String |  |
| participants | Number of participants other than moderators in a meeting room | String |  |
| quality | Quality of the streaming of the meeting | String |  |
| abwd | This is available bandwidth. | Boolean |  |

**Sample Request**



**Response**

The xxx server responds with JSON containing a unique room-id.

| **Element** | **Description** | **Type** |
| --- | --- | --- |
| result | Success or failure, the result of room creation | Boolean |
| room | Information about the created room | JSON Object |
| name | Name of the created Room | String |
| owner\_ref | Reference of the owner | String |
| settings | Settings of the newly created room | JSON Object |
| scheduled | Indicates, whether the meeting has been scheduled or not | Boolean, Default value is false. |
| cheduled\_time | Scheduled time of the meeting in GMT | String |
| adhoc | Indicates, the meeting room is an ad-hoc or permanent | Boolean, Default value is false. |
| created | Status of the created meeting room | String |
| room-id | The ID of the newly created meeting room | String |

**Sample Response**



**Adhoc Room**

It can be created instantly and is only available for a single call.

This setting is useful for applications that need to create a scheduled room quickly. It is beneficial because it eliminates the need to set up the room in advance, and the room will only exist for the duration of the call. Use the following Settings in JSON Payload for API Call to create a Scheduled Room:

**{"settings": {"scheduled": false, "adhoc": true}}**

**API Call to create Adhoc Room**

**Method**: POST

**Authorization**: Basic XXXXXXXX

**URL**: <https://api.xxx.io/video/v1/rooms>

**Headers**

| **Header** | **Description** | **Value** |
| --- | --- | --- |
| Content-Type | Format for request Data | application/JSON |

**POST Body**

| **Element** | **Description** | **Type** | **Required** |
| --- | --- | --- | --- |
| name | Name of the meeting room | String |  |
| owner\_ref | Reference of the owner | String |  |
| settings | Settings adjusted for the created meeting room | JSON Object |  |
| description | Description for the newly created meeting room | String |  |
| mode | Mode of the meeting room | String |  |
| scheduled | Indicates, meeting has been scheduled or not. | Boolean |  |
| adhoc | Indicates, the meeting room is adhoc or permanent | Boolean |  |
| duration | Duration of the scheduled meeting | number |  |
| moderators | Number of moderators in a meeting room | String |  |
| participants | Number of participants other than moderators in a meeting room | String |  |
| quality | Quality of the streaming of the meeting | String |  |
| canvas | Indication, canvas streaming enable or not | Boolean |  |
| screen\_share | Indication, screen share enable or not | Boolean |  |
| abwd |  | Boolean |  |
| max\_active\_talkers | Maximum active talkers in a meeting room | Number |  |

**Sample Request**



**Response**

The xxx server responds with JSON containing a unique room-id.

| **Element** | **Description** | **Type** |
| --- | --- | --- |
| result | Success or failure result of room creation | Boolean |
| room | Information about the created room | JSON Object |
| name | Name of the created Room | String |
| owner\_ref | Reference of the owner | String |
| settings | Settings of the newly created room | JSON Object |
| scheduled | Indicates, whether the meeting has been scheduled or not | Boolean, Default value is false. |
| adhoc | Indicates, the meeting room is an ad-hoc or permanent | Boolean, Default value is false. |
| created | Status of the created meeting room | String |
| room-id | ID of the newly created meeting room | String |

**Sample Response**



# **Manage Rooms**

**Overview**

Rooms are virtual meeting spaces within the xxx platform. They host Real-Time Collaboration (RTC) sessions. Rooms facilitate video conferencing, chat spaces, instant messaging rooms, and video streaming sessions for real-time collaboration.

Rooms can be Created, Retrieved, Updated or Deleted (CRUD) using the room route operation.

## **Manage Room APIs**

|  |  |
| --- | --- |
| **Create Room** | This API call allows developers to create a room for a WebRTC session. |
| **Update Room Information** | This API route is used to update room information. |
| **Delete Room** | This API call is used to delete a room. |
| **Get a List of Rooms** | This API route provides you with a complete list of rooms created within an application. |
| **Get list of Users in a Room** | This API route provides you with a list of all users (participants + moderator), connected to an active room |
| **Get Room Information** | This API route is used to get the complete room definition of a specified room. |

## **Create Room**

When a room is created, it merely creates a database entry with a room-id for xxx platform. The room-id is required to carry out CRUD (Create, Read, Update, Delete) operations for the room.

**Request**

This API call allows developers to create a room for a WebRTC session.

**Method**: POST

**Authorization**: Basic XXXXXXX

**URL**: <https://api.xxx.io/video/v2/rooms>

**Headers**

| **Header** | **Description** | **Value** |
| --- | --- | --- |
| Content-Type | Format for request Data | application/JSON |

**JSON Raw Body Payload on Request**

| **Parameter** | **Description** | **Required** | **Value** |
| --- | --- | --- | --- |
| name | Name of Room or Topic of Meeting | Yes | Alpha Numeric |
| owner\_ref | The room Owner ID of Reference. | Yes | Alpha Numeric |
| settings | Setting for Room type i.e., permanent, scheduled or ad-hoc. | Yes | Enumerated |
| settings.scheduled | Whether the room is a permanent room or scheduled for a specific duration.  Not editable. | Yes | Boolean |
| settings.adhoc | Whether the room is a Adhoc room. To create a Adhoc room, you need to set it to true along with settings.scheduled as false. Not editable. | Yes | Boolean |
| settings.scheduled\_time | This is the scheduled start time of the Room. |  | Date |
| settings.duration | Total Duration of Room. It is required only for Scheduled Room, | Yes | Positive Number. |
| settings.moderators | Total Number of Moderators allowed in the Room. If omitted.  Note: 1 moderator is set by default. | Yes | Numeric. |
| settings.participants | Total Number of Participants allowed in the Room.  Note: This value does not count the Moderator. | Yes | Numeric |
| settings.auto\_recording | This is the setting to enable recording automatically.  Note: Recording can be stopped and restarted manually using function calls. | No | Boolean |
| settings.screen\_share | This is set to enable screen sharing. | No | Boolean |
| settings.canvas | This is set to enable canvas streaming. | No | Boolean |
| settings.knock | This is to enable the knock feature for the participant to wait before joining a session. | No | Boolean |
| settings.wait\_for\_moderator | This is to make participants wait until a moderator joins the session. | No | Boolean |
| settings.quality | This is to set streaming quality i.e., HD, SD or LD. | No | Enumerated |
| settings.billing\_code | This is for the Applications own reference. | No | Alpha Numeric |
| settings.abwd | This is to disable ABWD (Auto-Bandwidth Detection) in a Room. | No | Boolean |
| settings.facex | This is to enable Face Recognition Analysis in this Room. | No | Boolean |
| settings.max\_active\_talkers | This is to define how many maximum streams; you need in Active Talkers.  Note: A maximum of 16 Active Talkers may be defined. | No | Number |
| settings.single\_file\_recording | This is to enable get live-transcoding done in a room defined with 2 users only. | No | Boolean |
| settings.role\_based\_recording | This is to define if the recording file needs to exclude Video Track from the user’s stream in the Room. | No | JSON Object |
| settings.live\_recording | This is to create a transcoded file in a live session without recording individual streams. Note: You can enable live recording and define the URL. | No | JSON Object |
| settings.media\_zone | This is to decide on a Media Zone for the Room among available Zones.  Note: that it is a subscription-controlled feature. | No | Enumerated |
| settings.watermark | This enables Watermarking of recorded files for the Room. | No | Boolean |
| sip | These are SIP Configuration Keys.  The value of each Key within the sip will be validated to have a legit value. |  | JSON Object |
| Enabled | This is to enable SIP Connection to the Room. | No | Boolean |
| Data | This is to carry custom data. You can define your own Keys in this object. |  | JSON Object |

**Sample Request**

### 

### **Response**

### xxx server responds with JSON Payload

| **Parameter** | **Description** | **Required** | **Value** |
| --- | --- | --- | --- |
|  |  |  |  |

**Sample Response**



## **Update Room Information**

**Request**

This API route is used to update room information. The JSON Payload contains only those keys that are permissible to update.

Note: Any update on the room definition will take effect only in subsequent sessions. Update the scheduled room 15 minutes prior to the scheduled start time.

**Method**: Patch

**Authorization**: Basic XXXXXXX

**URL**: [https://api.xxx.io/video/v2/rooms/{room\_id}](https://api.xxx.io/video/v2/rooms/%7broom_id%7d)

**Headers**

| **Header** | **Description** | **Value** |
| --- | --- | --- |
| Content-Type | Format for request Data | application/JSON |

**JSON Patch Body Payload on Request**

| **Parameter** | **Description** | **Required** | **Value** |
| --- | --- | --- | --- |
| name | This is the name of the Room | yes | string |
| settings | These are the settings of the Room | yes | JSON Payload |
| participants | Number of participants in the Room | yes | string |
| auto\_recording | This enables auto-recording in the Room | no | Boolean |

**Sample Request**



### **Response**

The xxx server responds with a result code 0, if the API call is successful, and room information is successfully updated.

**Sample Response**



## **Delete Room**

### **Request**

This API call is used to delete a room.

**Note:** The API call does not work for an active room i.e., a room with an ongoing WebRTC session in it.

**Method**: DELETE

**Authorization**: Basic XXXXXXX

**URL**: [https://api.xxx.io/video/v2/rooms/{room\_id}](https://api.xxx.io/video/v2/rooms/%7broom_id%7d)

**Sample Request**



### **Response**

The xxx server responds with a result code 0, if the API call is successful, and the room is successfully deleted.

**Sample Response**



## **Get a List of Rooms**

**Request**

This API route provides you with a complete list of rooms created within an application.

**Method**: GET

**Authorization**: Basic XXXXXXX

**URL**: <https://api.xxx.io/video/v2/rooms>

**Sample Request**



**Response**

The xxx server responds with a list of rooms and each room's details.

**Response Body Parameter table**

| **Parameter** | **Description** | **Value** |
| --- | --- | --- |
| Result | Success or failure results of the Get List operation | Boolean |
| rooms | This is the list of the rooms | array |
| name | Name of the Room | string |
| owner\_ref | The room Owner ID of Reference. | Alpha Numeric |
| settings | Setting for Room type, room mode and duration. | Enumerated/ JSON Object |
| setting.description | Given descriptive text. | string |
| setting.mode | This is the mode of the meeting. | string |
| settings.scheduled | Whether the room is a permanent room or scheduled for a specific duration. | Boolean |

**Sample Response**



## **Get list of Users in a Room**

**Request**

This API route provides you with a list of all users (participants + moderator), connected to an active room, i.e. a room with an ongoing session.

**Note**: The API call returns a null list for a room that is not active.

**Method**: GET

**Authorization**: Basic XXXXXXX

**URL**: [https://api.xxx.io/video/v2/rooms/{room\_id}/users](https://api.xxx.io/video/v2/rooms/%7broom_id%7d/users)

**Sample Request**



**Response**

The xxx server responds with a list of users and each user's details.

**Response table for List of users in a room**

| **Parameter** | **Description** | **Value** |
| --- | --- | --- |
| result | Success or failure result of the operation | Boolean |
| total | Total number of moderators  **Note**: Minimum 1 moderator is necessary | number |
| users | Users’ information | Array |
| name | Name of the user | string |
| user\_ref | Reference for the user | string |
| role | Role of the user i.e., moderator, participant or viewer. | string |
| permissions | Granted permissions to the moderators. | JSON Object |

**Sample Response**



## **Get Room Information**

**Request**

This API route is used to get the complete room definition of a specified room.

**Note**: the API Route has the room-id appended

**Method**: GET

**Authorization**: Basic XXXXXXX

**URL**: [https://api.xxx.io/video/v2/rooms/{room\_id}](https://api.xxx.io/video/v2/rooms/%7broom_id%7d)

**Sample Request**



**Response**

The xxx server responds with detailed room information.

**Sample Response**

