

WebRTC-CDN Quickstart

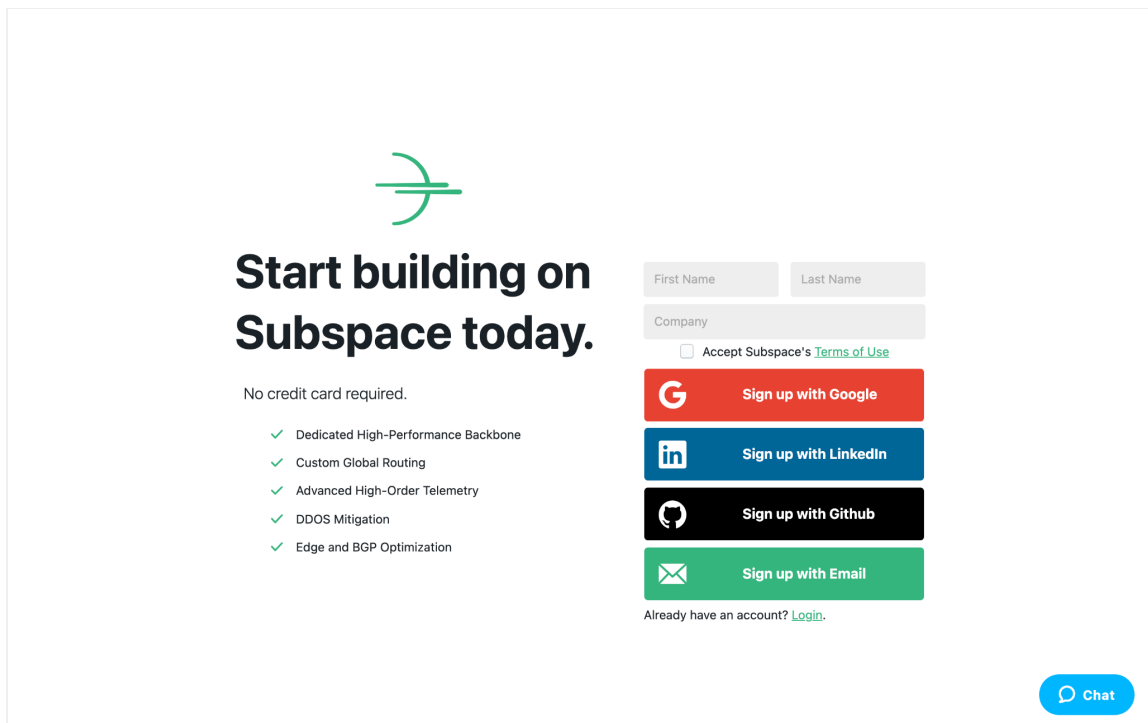
[WebRTC-CDN](#) (previously known as “GlobalTURN”) is WebRTC delivery network that handles traditional TURN NAT traversal functions as well as improving network performance for all WebRTC traffic via Subspace—a dedicated, secure internet for accelerating real-time applications.

Learn more about WebRTC and Subspace by visiting <https://www.subspace.com>.

Quickstart

1. Create a Subspace Account

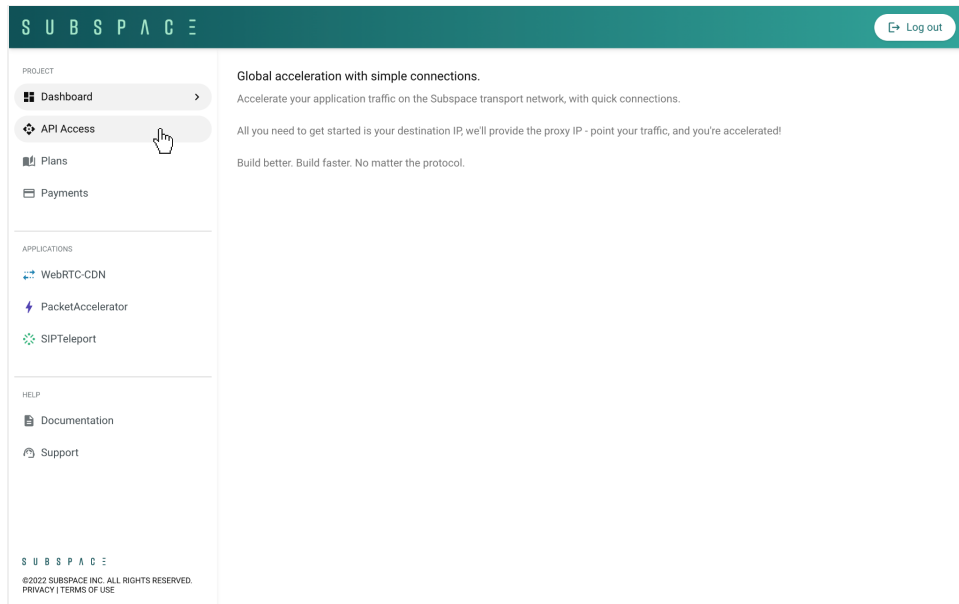
Sign up for the Subspace console at <https://console.subspace.com/try>.




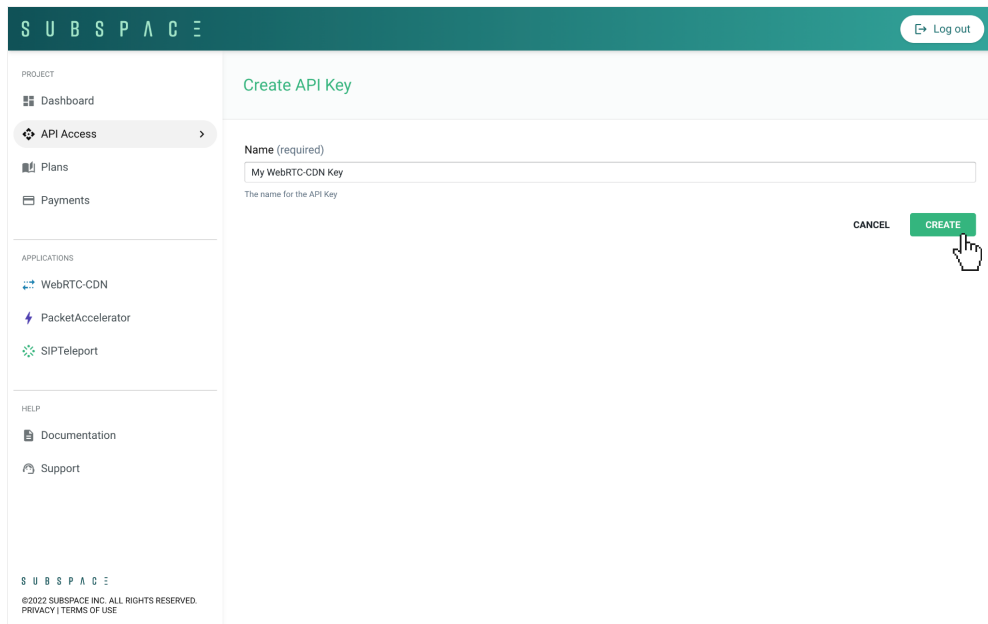
The screenshot shows the Subspace sign-up page. At the top center is the Subspace logo, a green stylized 'S' with a horizontal line through it. Below the logo is the heading "Start building on Subspace today." To the left of the sign-up form, there is a list of features with green checkmarks: "Dedicated High-Performance Backbone", "Custom Global Routing", "Advanced High-Order Telemetry", "DDOS Mitigation", and "Edge and BGP Optimization". Below this list is the text "No credit card required." The sign-up form on the right includes input fields for "First Name", "Last Name", and "Company". Below these fields is a checkbox labeled "Accept Subspace's Terms of Use". There are four sign-up buttons: "Sign up with Google" (red), "Sign up with LinkedIn" (blue), "Sign up with Github" (black), and "Sign up with Email" (green). At the bottom of the form, it says "Already have an account? [Login](#)." In the bottom right corner of the page, there is a blue "Chat" button.

2. Acquire an API Key

Once you have created an account and signed in to the Subspace console, you will land on the following home screen.



Select  **API Access** or click directly through to <https://console.subspace.com/apiaccess>.



Provide a name for your API key before proceeding.

Be sure to locally copy your Client Secret in addition to your Client ID for the new key, the Client Secret is only shown once and then never again.

Keep it secret, keep it safe.

API Key Details

Warning
Please keep the Client Secret - it will not be shown again. Obtain a token:

```
curl -X POST \  
-H 'content-type: application/json' \  
-d '{"client_id": "0PyLmSBJ[REDACTED]", "client_secret": "mot9wWt9waYRz6[REDACTED]" \  
https://subspace.auth0.com/oauth/token
```

COPY

Client Id	Client Secret
0PyLmSBJ[REDACTED]	mot9wWt9waYRz6[REDACTED] [REDACTED]
Name	Project Id
My WebRTC-CDN Key	prj-[REDACTED]
Inserted At	Updated At
2022-02-09 20:04:02Z	2022-02-09 20:04:02Z

FINISH

3. Acquire a JWT for use with the API

The latest formal API documentation is available at <https://subspace.com/api>.

The Subspace API authenticates via a JWT. To acquire one directly from the API itself, simply use your newly created Client ID and Client Secret.

Example Request (invalid credentials used for demo purposes):

```
curl --request POST \  
  --url "https://id.subspace.com/oauth/token" \  
  --header "content-type: application/json" \  
  --data '{ "client_id": "6UUCzXXb3ngie1WbDYMx8bWlju1IWcjQ", "client_secret":  
"x8bWljuz1IWcjQ2WrVcFityoKLjBXXb3ngie1WbDYMx8bWljuSqMDiZbAOwiygN9", "audience":  
"https://api.subspace.com/", "grant_type": "client_credentials" }'
```

Example Response:

```
{ "access_token": "eyJhbGciOiJSUzI1NiIsInR5cCI6IkpXVCIsImtpZCI6IiFVRXdRalE0TUUVNd01UUTV  
NMFV4UWtZNE0wTTJSRUl5UWtOR1JqZENORE14TVRJeFJlEaEVPQsJ9.eyJodHRwczovL2FwaS5zd  
WJzcGFjZS5jb20vbWV0YWRhdGEiOmsicHJvamVjdF9pZCI6InByal81ZlBoTmFhQmRLT2Nka2xyM  
nZGTnVTIn0sImZlcyI6Imh0dHBzOi8vaWQuc3Vic3BhY2UuY29tLyIsInN1Yil6Ing4YldJanV6MwX  
Y0pRNIIVVQ1hYYjNuZ2lIMVdiRFINQGNsaWVudHMiLCJhdWQiOiJodHRwczovL2FwaS5zdWJzcGFj  
ZS5jb20vliwiaWF0IjoxNjMyMjQ5NDcwLjE0eHAiOiJlE2MzZmZU4NzAsImF6cCI6Ing4YldJanV6MwX  
XY0pRNIIVVQ1hYYjNuZ2lIMVdiRFINIiwic2NvcGUiOiJjb25zb2xlOmFjY2VzcyBhY2NlbgVvYXRvcnM  
6cmVhZCBhY2NlbgVvYXRvcnM6d3JpdGUgc2lwdGVsZXBvcnQ6cmVhZCBzaXB0ZWxlG9ydDp3  
cmI0ZSBwcm9qZWNOczpyZWFKliwiZ3R5IjoIY2xpZW50LWNyZWRIbnRyYWxzliwicGVybWlzc2lvb  
nMiOlsiY29uc29sZTphY2Nlc3MiLCJhY2NlbgVvYXRvcnM6cmVhZCIsImFjY2VsZXJhdG9yczp3cmI  
0ZSIsInNpcHRlbgVwb3J0OnJlYWQiLCJzaXB0ZWxlG9ydDp3cmI0ZSIsInByb2pY3RzOnJlYWQiX  
X0.GSTY9XqN4lJrdximiE9YU0ROPYiyhFziYQyHF5mPfYL1h693_BkhWaR94ecKs4e_q9Sh6tWT5-T5  
txuFtUsVY1dFq2FljHbSy4NycYGx2h2iY_p00rN-YO_k2PqzV2xKnFoUUXChHk6GXvKfG0bcTIUcKh  
So7vIJIUQXA3VQeotjANwbf2VcMAL-2AARi1M6VPyf3fMgQgNI45dzKIWB6t0b8J-Gva6g0rEOuMB  
0pli2JaKRylCn0All7cyw_flnQQuUaYrdWUsRw0-Jh9XBxV5MdQwF3IGOHFM73N-eySLJDgXS6YRj  
8hW4HAYlkGUVrS_laQOw9LYOTBPxPut7Q", "scope": "console:access accelerators:read  
accelerators:write globalturn:access sipteleport:read sipteleport:write projects:read  
rtpspeed:read rtpspeak:write", "expires_in": 86400, "token_type": "Bearer" }
```

Once you have your access_token, the entire API is available to you.

4. Fetch TURN Credentials

Subspace WebRTC-CDN is globally deployed after being enabled by the appropriate API call.

Use the JWT Bearer token you obtained in the previous step. Each request to the WebRTC-CDN API will fetch a set of unique credentials for WebRTC-CDN, meant to be used by a single WebRTC client. Credentials obtained from this API will be valid for 24 hours.

API documentation can be found [here](#).

Example Request:

```
curl --request POST \  
  --url "https://api.subspace.com/v1/webrtc-cdn" \  
  --header "Authorization: Bearer  
eyJhbGciOiJSUzI1NiIsInR5cCI6IkpXVCIsImtpZCI6IlFVRXdRaleE0TUUVNd01UUTVNMVF4UWtZNE0w  
TTJSRUl5UWtOR1JqZENORE14TVRJeFJEaEVPQSJ9.eyJodHRwczovL2FwaS5zdWJzcGFjZS5jb20vb  
WV0YWRhdGEiOi8vaWUuc3Vic3BhY2UuY29tLyIsInN1YiI6Ing4YldJanV6MWxXY0pRNiVWQ1hYYjN  
uZ2IIMVdiRFINQGNsaWVudHMlLCJhdWQiOiJodHRwczovL2FwaS5zdWJzcGFjZS5jb20vliwiaWF0I  
joXNjMyMjQ5NDcwLzJleHAiOiJlMzZlZmZuU4NzAsImF6cCI6Ing4YldJanV6MWxXY0pRNiVWQ1hYYj  
NuZ2IIMVdiRFINliwic2NvcGUiOiJjb25zb2xlOmFjY2VzcyBhY2NlbGVyYXRvcnM6cmVhZCBhY2Nlb  
GVyYXRvcnM6d3JpdGUgc2lwdGVsZXBvcnQ6cmVhZCBzaXB0ZWxlG9ydDp3cmI0ZSBwcm9qZ  
WN0czpyZWFKliwiZ3R5IjoiY2xpZW50LWNyZWRIbnRyYXZliwicGVybWlzc2lvbnMiOiY29uc29s  
ZTphY2Nlc3MiLCJhY2NlbGVyYXRvcnM6cmVhZCIsImFjY2VsZXJhdG9yczp3cmI0ZSIsInNpcHRlbG  
Vwb3J0OnJlYWQiLCJzaXB0ZWxlG9ydDp3cmI0ZSIsInByb2pY3RzOnJlYWQiXX0.GSTY9XqN4lJrdx  
imiE9YUOROPYiyhFziYQyHF5mPFYL1h693_BkhWaR94ecKs4e_q9Sh6tWT5-T5txuFtUsVY1dFq2FI  
jHbSy4NycYGx2h2iY_p00rN-YO_k2PqzV2xKnFoUUXChHk6GXvKfG0bcTIUcKhSo7vIJIUQXA3VQe  
otjANwbf2VcMAL-2AARi1M6VPyf3fMgQgNI45dzKIWB6t0b8J-Gva6gOrEOuMB0pli2JaKRylCn0All  
7cyw_flnQqeuUaYrdWUsRw0-Jh9XBxV5MdQwF3IGOHFM73N-eySLJDgXS6YRj8hW4HAYlkGUVr  
S_laqOw9LYOTBPxPut7Q"
```

Example Response:

```
{"ice_servers":[{"username":"9992338615:prj_5fPhNaaBdKOcJklr2vFNuS","credential":"+C40xe  
ilrM8d+dQyEgQmyatNnLM=","url":"turn:globalturn.subspace.com:3478?transport=udp","urls"  
:"turn:globalturn.subspace.com:3478?transport=udp"},{"username":"9992338615:prj_5fPhNa  
aBdKOcJklr2vFNuS","credential":"+C40xeilrM8d+dQyEgQmyatNnLM=","url":"turn:globalturn.s  
ubspace.com:3478?transport=tcp","urls":"turn:globalturn.subspace.com:3478?transport=tcp"  
}]}
```

5. RTCPeerConnection Setup

Send the response from the WebRTC-CDN API to your WebRTC clients using your signalling mechanism.

The response format can be easily consumed by the WebRTC RTCPeerConnection object.

```
const configuration = {
  "ice_servers": [
    {
      "username": "9992338615:prj_5fPhNaaBdKOcJklr2vFNuS",
      "credential": "+C40xeilrM8d+dQyEgQmyatNnLM=",
      "url": "turn:globalturn.subspace.com:3478?transport=udp",
      "urls": "turn:globalturn.subspace.com:3478?transport=udp" },
    {
      "username": "9992338615:prj_5fPhNaaBdKOcJklr2vFNuS",
      "credential": "+C40xeilrM8d+dQyEgQmyatNnLM=",
      "url": "turn:globalturn.subspace.com:3478?transport=tcp",
      "urls": "turn:globalturn.subspace.com:3478?transport=tcp"
    }
  ],
  iceTransportPolicy: "relay"
};

const peerConnection = new RTCPeerConnection(configuration);
```

We recommend setting "iceTransportPolicy" to "relay." This will force the WebRTC client to use WebRTC-CDN over other ICE candidates.

Relay ICE candidates are usually weighted lower than other ICE candidates that are assumed to be more direct from a network perspective, with WebRTC-CDN this assumption is no longer safe, since WebRTC-CDN is more performant than other ICE candidates.

If you have additional questions, feel free to reach out directly via support@subspace.com.