



SIP Trunking via API

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Table of Contents

Revision History	3
SIP Trunking via API.....	6
Authentication.....	6
Creating a SIP Trunk	7
SIP Trunk Fields	8
Forwarding Settings.....	9
Forwarding Fields.....	9
SIP Trunk Registration Status	11
Get Telephone Numbers and SIP Trunks.....	11
Route Inbound Calls to SIP Trunk.....	13
Obtaining SIP Credentials for Registration	14
Delete a SIP Trunk	15

Revision History

DATE	DESCRIPTION	AUTHOR
2024-02-05		Jake Friedberg

About Alianza's APIs

Alianza has many public APIs that can be used for partition and account orchestration. To view our full suite of APIs, with code examples, please view our public API documentation: <https://api.alianza.com/v2/apidocs/#/>

For an overview of our API solution, see [Alianza's Provisioning APIs](#) data sheet.

Additionally, Alianza provides a beta environment for customers to develop in a non-production environment. Talk to your Alianza representative to have a beta partition created with settings that mimic those of your production environment. The beta environment is not an exact copy of the production environment, and IDs of key elements are different including *PartitionId*, *CarrierId*, *CallingPlanId*.

If you have any questions regarding our public APIs, please contact your Customer Success Manager or sales representative for assistance.

Authentication/Working with Tokens

Before using the Alianza API, an authentication call must be made to acquire a token. The token is passed in the X-AUTH-TOKEN header in each subsequent call. Tokens are valid for 8 hours from the last use.

POST	<code>/v2/authorize</code>
-------------	----------------------------

POST BODY

NAME	DESCRIPTION OF VALUE
username	Alianza platform account needed to access platform. It is recommended to create an account used only by the API. Username is an email address. (string)
password	Password assigned to the username. (string)

RESPONSE BODY

NAME	DESCRIPTION OF VALUE
authToken	Authentication token used in the X-AUTH-TOKEN header in each subsequent call (string)
partitionId	Unique key used to reference the Alianza service provider partition. (string)

* Additional name/values not listed

EXAMPLE POST JSON

```
{
  "username" : "user@email.com",
  "password" : "thisISmyP4ssw0rd"
}
```

EXAMPLE RESPONSE

The response includes details about this management user and an Auth Token to be used as X-AUTH-TOKEN in the header of subsequent requests.

```
{
  "authToken": "xRyqjCTfSK3t15W6aa61xg",
  "userId": "9sPet0RZ5mnniO271ojg",
  "userType": "User",
  "username": "user@email.com",
  "firstName": "User",
  "lastName": "Test",
  "partitionId": "asdk12387asdhjkASD1",
  "partitionName": "TEST CUSTOMER",

  "permissions": {
    "Account": "DELETE",
    ...
  }
}
```

CURL REQUEST

Here's an example of how to use this Auth Token as a cURL request:

```
curl --location --request POST
'https://api.alianza.com/v2/partition/asdk12387asdhjkASD1/account'
--header 'Content-Type: application/json'
--header 'X-AUTH-TOKEN: xRyqjCTfSK3t15W6aa61xg'
--data-raw '{
  "partitionId": "asdk12387asdhjkASD1",
  . . . .
  . . . .
}'
```

SIP Trunking via API

SIP, or Session Initiation Protocol, has become the standard voice connection method in the VoIP industry. A SIP trunk is a connection that carries calls for multiple endpoints, as opposed to a single endpoint, as in the case of most other SIP devices. It's usually connected to a PBX (private branch exchange) as opposed to an individual phone. SIP trunks typically result in a charge on a per-concurrent call basis, in addition to any toll charges for calls placed across the trunk.

Alianza's cloud communications platform supports registration-based SIP trunks.

[Alianza's REST API](#) web services are a powerful set of tools that can be used to create and control all aspects of the end-user accounts on Alianza's cloud communications platform. Our service provider customers can take advantage of the API to integrate with the platform.

This document explains how to create, modify, and manage SIP trunks via APIs. This process assumes that an account has already been created, at least one telephone number is available on the account, and you have both a partition ID and account ID available.



LEARN MORE

Visit the [Alianza Help Center](#) for more information about SIP Trunking.

Authentication

To perform any operation with the Public API, an AuthToken must first be obtained by making a POST request to the Authorize end point and providing a valid Admin Portal username and password.

POST	<code>https://api.alianza.com/v2/authorize</code>
-------------	---

EXAMPLE POST JSON

```
{
  "username" : "user@email.com",
  "password" : "thisISmyP4ssw0rd"
}
```

EXAMPLE RESPONSE

The response includes details about this management user and an Auth Token to be used as X-AUTH-TOKEN in the header of subsequent requests.

```
{
  "authToken": "xRyqjCTfSK3t15W6aa61xg",
  "userId": "9sPet0RZ5mnniO271ojg",
  "userType": "User",
  "username": "user@email.com",
  "firstName": "User",
  "lastName": "Test",
  "partitionId": "asdk12387asdhjkASD1",
  "partitionName": "TEST CUSTOMER",

  "permissions": {
    "Account": "DELETE",
    ...
  }
}
```

CURL REQUEST

Here's an example of how to use this Auth Token as a cURL request:

```
curl --location --request POST
'https://api.alianza.com/v2/partition/asdk12387asdhjkASD1/account'
--header 'Content-Type: application/json'
--header 'X-AUTH-TOKEN: xRyqjCTfSK3t15W6aa61xg'
--data-raw '{
  "partitionId": "asdk12387asdhjkASD1",
  . . . .
  . . . .
}'
```

Creating a SIP Trunk

A SIP trunk can only be created on an existing account. "Siptrunk_2" is the most up-to-date version of this endpoint. The ID that is returned on the response object should be stored by your automation to be used for reference with subsequent API requests.

POST	<code>https://api.alianza.com/v2/partition/{{PARTITION_ID}}/account/{{ACCOUNT_ID}}/siptrunk_2</code>
-------------	--

SIP Trunk Fields

Object	Description
trunkName	Required. The name of the trunk for reference purposes. Must be unique. This does not affect call routing.
sipUsername and sipPassword	Required. These are the credentials your PBX will use to register with the Alianza platform. They should be randomized and transferred directly to the PBX using automation rather than be written down or remembered and typed in manually.
concurrentCalls	Required. This is the number of calls that may happen at the same time on a given trunk. Also called Concurrent Call Paths.
primaryTN	Optional. The Primary Phone Number is used to route 7-digit dialing and local services (811, 211, etc.). It is NOT used for caller ID.
callbackNumber	Optional. This is the number that will be used for E911 callback. It must be a phone number that is provisioned through Alianza's platform.
localServicesEnabled	Optional. This enables the SIP trunk to dial local services (811, 211, etc.). If a value is not provided, it will default to <i>False</i> .
extensionPatterns	Optional. An array of inclusive account extension ranges, expressed as decimals, which will be routed to the SIP trunk. For example, "21XX" indicates all extensions 2100–2199, and "211X" indicates all extensions 2110–2119. Individual extensions can also appear in the list.

EXAMPLE REQUEST

```
{
  "accountId": "{{ACCOUNT_ID}}",
  "partitionId": "{{PARTITION_ID}}",
  "trunkName": "TRUNK-NAME",
  "callbackNumber": "18015551212",
  "primaryTn": "18015551212",
  "localServicesEnabled": true,
  "concurrentCalls": 10,
  "sipPassword": "TRUNK_PASSWORD",
  "sipUsername": "TRUNK_USERNAME"
}
```


EXAMPLE RESPONSE

```
{
  "partitionId": "{{PARTITION_ID}}",
  "accountId": "{{ACCOUNT_ID}}",
  "trunkName": "TRUNK-NAME",
  "id": "LhmtrbuvQZ6qjIqW5ZF_mQ",
  "sipPassword": "TRUNK_PASSWORD",
  "sipUsername": "TRUNK_USERNAME",
  "callbackNumber": "18015551212",
  "concurrentCalls": 10,
  "callingPlans": [{
    "referenceId": "LhmtrbuvQZ6qjIqW5ZF_mQ",
    "referenceType": "SIP_TRUNK",
    "callingPlanProductId": "kDYwy3XRSeapkI8uHi9ziQ",
    "startDate": "2022-11-29T19:46:29.236Z",
    "planMinutes": 20000,
    "secondsRemaining": 1200000
  }],
  "telephoneNumbers": [],
  "sipProxyServer": "siptrunk.p2.alianza.com:5065",
  "lockedOut": false,
  "localServicesEnabled": true,
  "primaryTn": "18015551212"
}
```

Forwarding Settings

This step is optional. Use this endpoint to set Overflow Routing, Inbound Failover Routing, and Forward All settings. Each forwarding object will have a *referenceType* and *referenceId*, and *forwardOnFailure* can be enabled and disabled.

Forwarding Fields

Object	Description
forwardAlways	Optional. This can be configured and then enabled or disabled. When enabled, all inbound calls are forwarded, ignoring any Failover Routing settings. This is used when there is a known problem at the site where the PBX is located and all calls need to be diverted

forwardOnFailure	Optional. Forward to an array of destinations. When a call to this SIP trunk fails, it will attempt to route calls to the first available SIP trunk, starting with the top of this list. If all SIP trunks fail, the call's final destination will be a failover.
forwardOnCapacityExceeded	Optional. Also known as Inbound Failover Routing. It functions the same as <i>forwardOnFailure</i> , but is used specifically when the number of current concurrent calls exceeds the Concurrent Call Paths allowed.
referenceType	Required. This is required on each of the forwarding objects and refers to the type of object that calls will be routed to. The available options are BUSY, END_USER, IVR, SIP_TRUNK, TELEPHONE, and VOICE_MAIL.
referenceId	Required. This is required on each of the forwarding objects and refers to an object on the platform. The ID for a TELEPHONE type will be an 11-digit telephone number. The ID for the other object types will be an ID from the Alianza platform.

PUT	<code>https://api.alianza.com/v2/partition/{PARTITION_ID}/account/{ACCOUNT_ID}/siptrunk_2/{SIP_TRUNK_ID}/forward</code>
------------	---

EXAMPLE REQUEST

```
{
  "forwardAlways": {
    "referenceType": "TELEPHONE",
    "referenceId": "18015551212",
    "enabled": true
  },
  "forwardOnFailure": [{
    "referenceId": "b7qW85coQ9qEUYArxEIBbg",
    "referenceType": "SIP_TRUNK"
  }, {
    "referenceType": "IVR",
    "referenceId": "69bqqdviRSO2XjBMzAw8Iw"
  }],
  "forwardOnCapacityExceeded": [{
    "referenceId": "b7qW85coQ9qEUYArxEIBbg",
    "referenceType": "SIP_TRUNK"
  }, {
    "referenceType": "SIP_TRUNK",
    "referenceId": "LhmtrbuvQZ6qjIqW5ZF_mQ"
  }, {
```

```

        "referenceType": "END_USER",
        "referenceId": "51jkw6hvSy2thJWHf7sxUQ"
    }
}

```

EXAMPLE RESPONSE

```
204 No Content
```

SIP Trunk Registration Status

Alianza provides an endpoint to indicate if the SIP trunk is registered (connected) to the Alianza platform. If this returns **true**, the platform will attempt to route calls to this trunk. If this returns **false**, the platform will not attempt to route calls to this trunk and will follow failure routing. This should be your first step when troubleshooting phone call issues.

GET	<code>https://api.alianza.com/v2/partition/{{PARTITION_ID}}/account/{{ACCOUNT_ID}}/siptrunk_2/{{SIP_TRUNK_ID}}/registrationstatus</code>
------------	--

EXAMPLE RESPONSE

```

{
    "registered": false
}

```

Get Telephone Numbers and SIP Trunks

For a SIP trunk to receive inbound phone calls, a telephone number needs to reference a SIP trunk. To do this, send an update to the Telephone Number endpoint with either a PUT or PATCH.

If you don't know the SIP Trunk ID or a telephone number on the account, query a list of what is currently on an account using GET requests.

GET	<code>https://api.alianza.com/v2/partition/{{PARTITION_ID}}/account/{{ACCOUNT_ID}}/telephonenumber</code>
------------	---

This will return an array of *telephoneNumber* objects. Choose a number from this list to make updates. You'll need the 11-digit number from the response for subsequent requests.

EXAMPLE RESPONSE

```
[
  {
    "phoneNumber": "18015551212",
    "functionType": "ELS",
    "servicePackageType": "Usage",
    "accountId": "oWUgHknjS52mrdsfFDtKvg",
    "partitionId": "1",
    "customerServiceRecord": {...},
    "carrierStatus": "ACTIVE",
    "orderVersion": "XyT9yabTQnKoiJjaTAcZug",
    "directoryListing": {...},
    "id": "18015551212",
    "tollFree": false
  }
]
```

GET

`https://api.alianza.com/v2/partition/{{PARTITION_ID}}/account/{{ACCOUNT_ID}}/siptrunk`

This will return an array of SIP trunks. You'll need the ID from the response for subsequent requests.

EXAMPLE RESPONSE

```
[
  {
    "partitionId": "PARTITION_ID",
    "accountId": "ACCOUNT_ID",
    "trunkName": "TRUNK_NAME",
    "id": "LhmtrbuVQZ6qjIqW5ZF_mQ",
    "sipPassword": "TRUNK_PASSWORD",
    "sipUsername": "TRUNK_USERNAME",
    "callbackNumber": "18015551212",
  }
]
```

```

    "concurrentCalls": 10,
    "callingPlans": [{
      "referenceId": "LhmtrbuVQZ6qjIqW5ZF_mQ",
      "referenceType": "SIP_TRUNK",
      "callingPlanProductId": "kDYwy3XRSeapkI8uHi9ziQ",
      "startDate": "2022-11-29T19:46:29.236Z",
      "planMinutes": 20000,
      "secondsRemaining": 1200000
    }],
    "telephoneNumbers": [],
    "sipProxyServer": "siptrunk.b2.alianza.com:5065",
    "lockedOut": false,
    "localServicesEnabled": true,
    "primaryTn": "19702201000"
  }
]

```

Route Inbound Calls to SIP Trunk

For a SIP trunk to receive Inbound calls from an external number, you'll need to "reference" or "route" a telephone number to a SIP trunk. To do this, update a *telephoneNumber* object using either a PUT or a PATCH on the Telephone Number endpoint, and set the *referenceId* to the SIP Trunk ID and *referenceType* to *SIP_TRUNK*.

To do a PUT, first GET the full object and change only the fields you wish to change. If you do a PATCH, include only the fields you are changing.

PATCH

```
https://api.alianza.com/v2/partition/{{PARTITION_ID}}/account/{{ACCOUNT_ID}}/telephonenumber/18015551212
```

EXAMPLE REQUEST BODY JSON

```

{
  "referenceId": "LhmtrbuVQZ6qjIqW5ZF_mQ",
  "referenceType": "SIP_TRUNK"
}

```

EXAMPLE RESPONSE JSON

```
{
  "phoneNumber" : "18015551212",
  "referenceType" : "SIP_TRUNK",
  "referenceId" : "LhmtrbuVQZ6qjIqW5ZF_mQ",
  "functionType" : "ELS",
  "servicePackageType" : "Usage",
  "accountId" : "ACCOUNT_ID",
  "partitionId" : "PARTITION_ID",
  "customerServiceRecord" : {...},
  "carrierStatus" : "ACTIVE",
  "orderVersion" : "XyT9yabTQnKoiJjaTAcZug",
  "directoryListing" : {...},
  "ringType" : "StandardRing",
  "id" : "19702201000",
  "tollFree" : false
}
```

Obtaining SIP Credentials for Registration

SIP credentials are stored on the SIP Trunk object. To retrieve these credentials, do a GET on this object. You will need the SIP Trunk ID to make this request.

Credentials are required when a SIP trunk is created, so you can also set them in memory of your integration application rather than querying the API.

GET	<code>https://api.alianza.com/v2/partition/{{PARTITION_ID}}/account/{{ACCOUNT_ID}}/siptrunk/{{SIP_TRUNK_ID}}</code>
------------	---

EXAMPLE RESPONSE BODY JSON

```
{
  "partitionId": "PARTITION_ID",
  "accountId": "ACCOUNT_ID",
  "trunkName": "TRUNK-NAME",
  "id": "b7qW85coQ9qEUYArxEIBbg",
  "sipPassword": "TRUNK_PASSWORD",
  "sipUsername": "TRUNK_USERNAME",
  "callbackNumber": "18015551212",
  "concurrentCalls": 10,
}
```

```

"callingPlans": [...],
"telephoneNumbers": [],
"sipProxyServer": "siptrunk.p2.alianza.com:5065",
"lockedOut": false,
"localServicesEnabled": true,
"primaryTn": "18015551212"
}

```

Delete a SIP Trunk

When a SIP trunk is created in error or is no longer needed, it can be deleted via API.

DELETE

https://api.alianza.com/v2/partition/{{PARTITION_ID}}/account/{{ACCOUNT_ID}}/siptrunk/{{SIP_TRUNK_ID}}

EXAMPLE RESPONSE

204 No Content

DELETING AN ENTIRE ACCOUNT

Deleting a SIP trunk does not delete any other objects connected to it, such as telephone numbers, voicemail boxes, users, or IVRs. If you need to completely tear down a customer and all their objects, first delete each telephone number and then delete the account.



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