

# Cloudpath Enrollment System REST API User Guide, 5.8

Supporting Cloudpath Software Release 5.8

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# Cloudpath REST API Basics

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## Overview

Cloudpath uses REST API v2, which is a RESTful API designed for external consumer use. It uses Json Web Tokens for authentication, and also requires an API Key. This authentication allows for auditing, and provides greater security than only requiring an API key.

### NOTE

Basic knowledge of REST API v2 and Json format are necessary.

Cloudpath provides REST APIs to enable integration with existing processes or third-party applications. REST APIs allow the system to actively notify external systems (outbound calls) and to be queried and manipulated by external systems (inbound calls).

REST APIs are resource-based, and support the following HTTP verbs:

- GET (to get information about a resource)
- POST (to create a resource)
- PUT (to change the state of a resource)
- DELETE (to delete a resource)

REST APIs also return errors by using HTTP return codes. Refer to [Return Codes and Error Response Format](#) on page 10.

**Root URI:** The root URI is in the form of:

```
<Cloudpath FQDN>/admin/apiv2/{APIKey}
```

## Format for Variables

Variables in Cloudpath are in the following format: `${MAC_ADDRESS}`, `${USERNAME}`, or `${IP_ADDRESS}`. See the Enrollment Variables section on the Enrollment Record page in the UI to view available variables, variable syntax, and expected values.

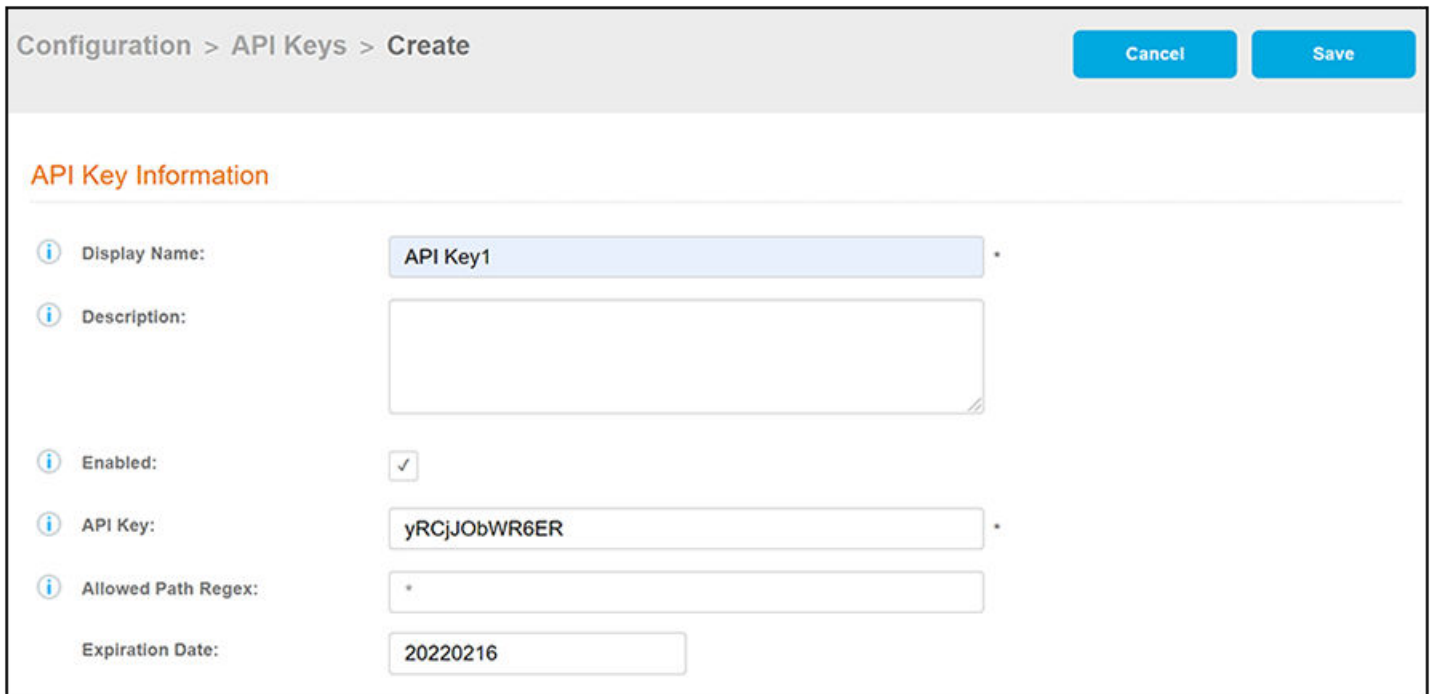
Only variables which are populated at the time of the notification event are sent. MAC addresses and other variables may be populated through events other than onboarding, such as data prompts.

## Creating an API Key

For Cloudpath to honor inbound requests from external systems, the external system must authenticate using an API key. The API key is part of the REST API query used to retrieve information from the Cloudpath system. Authentication is a combination of this API key and an authentication with the Token API. To create an API Key, perform the following steps:

1. Go to **Configuration > API Keys**.
2. Click **Add API Key**.

FIGURE 1 Create API Key



The screenshot shows a web interface for creating an API key. The breadcrumb navigation is 'Configuration > API Keys > Create'. There are 'Cancel' and 'Save' buttons in the top right. The main section is titled 'API Key Information'. It contains several form fields, each with an information icon (i) to its left:

- Display Name:** A text input field containing 'API Key1'.
- Description:** A large empty text area.
- Enabled:** A checkbox that is checked.
- API Key:** A text input field containing 'yRCjObWR6ER'.
- Allowed Path Regex:** A text input field containing '\*'.
- Expiration Date:** A text input field containing '20220216'.

Cloudpath provides a generated **APIKey**, or you can specify a custom key. An API key must be URL-safe.

The **Allowed Path Regex** is a regex specifying the paths allowed to be called with this API key. For example, `/admin/api/.*/certificate/.*` can query anything in the 'certificate' realm. If left blank, there is no restriction.

For the **Expiration Date**, the Cloudpath system defaults to a one-year expiration, but this value can be modified.

## Security

The Cloudpath REST v2 APIs use Json Web Tokens (JWT) to secure all endpoints, in addition to using the API key.

### NOTE

Root URIs and the generation of tokens is somewhat different for tenant portal APIs. If you are using tenant portal APIs, be sure to see [Tenant Portal API Requirements](#) on page 123.

The user calls `.../admin/apiv2/APIKey/token`, with a user name and password, and, if authenticated, a JWT token is returned to the user in the authentication response body.

**NOTE**

You must include an active JWT token in the "Authorization" HTTP request header of all subsequent requests.

The token has a five-minute timeout and can be refreshed by requesting a new token while the current token is still valid. In addition, the ".../admin/apiv2/APIKey/token" endpoint provides basic information about the token's expiration.

**NOTE**

If you change the API key in the Cloudpath UI, all tokens become invalid, and new authentications are required. In addition, if you disable the API key, all API requests are rejected, even if the token is still valid and the user has already been authenticated.

The following table lists the properties that can be used in the body of a token request and/or are provided in the response body.

**TABLE 1** Resource: Token

Property Name	Type	Editable	Filter or Sort	Optional	Description
userName	String	Yes	Neither	Required only on a PUT call request, but always returned in the response to a PUT or a POST.	The username of the person trying to use the API. The user needs to have the account admin role for the account being requested.
password	String	Yes	Neither	Required only for a POST request.	The password for the user. Will never be returned in the response body.  <b>NOTE</b> Not required for obtaining a token for the tenant portal APIs. Refer to <a href="#">Tenant Portal API Requirements</a> on page 123.
token	String	No	Neither	Yes (Never needed in request body)	The token returned for this user. Will be ignored on a POST and a PUT.
expireDateTime	String < DateTime>	No	Neither	Yes (Never needed in request body)	Expiration time and date for the token returned to the user, given in iso80601 date/time format.

## Security URIs and Actions

The following table indicates the URIs that you can append to the root URI, along with the actions you can take, and possible return codes you can receive.

**TABLE 2** Security URIs and Actions

URI	Action	Description	Return Codes
/token	POST	Authenticates the user and returns a valid security token. The body must include the username and password.	401 - Unauthorized 201 - Created
	PUT	Provides an updated token, without requiring a new login. The body must be empty and the current valid token must be in the "Authorization" header.	422 - Entity cannot be processed (if the body is not empty). 406 - Not Acceptable (token has expired) 401 - Unauthorized

## Example of Generating an Authorization Token

**NOTE**

Root URIs and the generation of tokens is somewhat different for tenant portal APIs. If you are using tenant portal APIs, be sure to see [Tenant Portal API Requirements](#) on page 123.

**URI:**

This example uses the following URI:

```
https://Jeff245.cloudpath.net/admin/apiv2/yRCjJObWR6ER/token
```

where:

- https://Jeff245.cloudpath.net/admin/apiv2 is the root URI of the Cloudpath system being used (must include https, as shown)
- yRCjJObWR6ER is an example of an API key generated from the **Configuration > API Keys** section of the Cloudpath UI

**Request Headers:**

The following table shows the required request header for this URI example:

**TABLE 3** Request Header

Key	Value
Content-type	application/json

**Request Body:**

An example of the request body is shown below (this provides administrative login credentials to the Cloudpath system being used):

```
{ "userName": "jeffr@commscope.com",
  "password": "test" }
```

**Action:**

Use the **POST** action to send the request.

**Response Body:**

Once the request is sent, you will receive the response body that provides the token and its expiration, as shown in the following example:

```
{
  "userName": "jeffr@commscope.com",
  "token":
  "eyJhbGciOiJIUzI1NiJ9.eyJzdWIiOiJqZWZmLnJob2RpZUBhcnJpcy5jb20iLCJyb2xlUGsiOiIyMTAwMCIzImFjY291bnRBZG1pb1BrIjoiMiIsImFwaUtleSI6IkhOV2dNSG93cERCNCIsIm1hdCI6MTU3NTQ4NjExMSwiZXhwIjozNTc1NDg2NDExfQ.JwBWDgj_K7jP1kDvVU8aq_v
  mNulsdx2FD_MUNLAuymQ",
  "expireDateTime": "2019-12-04T12:06:51-07:00[America/Denver]"
}
```

**NOTE**

Because each token expires after five minutes, you will need to re-send the request often. You need to use the active token with all other requests, as shown elsewhere in this document.

## List Format of Response Body of GET Calls

All GET calls that are not for a specific ID will return a list of items.

The basic Json schema and an example of this schema are shown below.



## Json Schema

```
{
  "type": "object",
  "properties": {
    "page": {
      "type": "object",
      "properties": {
        "pageSize": { "type": "integer" },
        "page": { "type": "integer" },
        "totalCount": {type:"long" }
      },
      "required": [ "pageSize", "page" ]
    },
    "contents": {
      "type": "array",
      "items": [
        {
          "type": "object"
        }
      ]
    }
  },
  "required": [
    "page",
    "contents"
  ]
}
```

## Example of Json Response Body From a GET Call That Provides Lists

Each set of brackets ( [ ] ) indicates a list, and each entry with curly braces ( { } ) is an item in that list.

```
{
  "page": {
    "pageSize": 5,
    "page": 3,
    "totalCount": 441
  },
  "contents": [
    {
      "guid": "uniqueId",
      "property1": "propertyValue",
      "property2": "property2Value"
    },
    {
      "guid": "differentUniqueId",
      "property1": "propertyValueForItem2",
      "property2": "property2ValueForItem2"
    }
  ]
}
```

For an example of the response body that shows all the DPSKs within a specific DPSK pool, see [Example of Using GET to Obtain Listings of Multiple DPSKs Within an Existing DPSK Pool](#) on page 45

For an example of changing the Page properties (the first part of the response body shown above), see [Example of Changing Page Properties in a GET Call](#) on page 52

## Sorting and Filter/Query

GET calls that are not by ID support paging and sorting/filtering as defined by each resource.

Tables that are provided in this document for the various resources (such as DPSKs) provide information about any query and sort operators that are available for each property. You can also combine a query with a sort, as well as with paging, in any request.

### Sorting Syntax

To sort by a property, the query parameter is "sortBy". The property name is listed first, followed by a colon and the requested sort order: "desc" for descending or "asc" for ascending. For a multiple sort-order request, the order is implied by the order of the properties listed. Invalid properties are ignored and will not affect the sort order nor generate an error.

#### NOTE

Root URIs are different for tenant portal APIs. If you are using tenant portal APIs, be sure to see [Tenant Portal API Requirements](#) on page 123.

```
https://cloudpathServer/admin/apiv2/apiKey/resource?sortBy=prop1:desc,prop2:asc
```

For an example of a sort, including appending the URI with the sort parameter, see [Example of Sorting a GET Call](#) on page 59.

### Query Operators

The following query operators are supported:

**TABLE 4** Supported Query Operators

Operator	Meaning
like	Does a comparison equivalent to a database query of %val% on strings only.
eq	Does a direct comparison where the two values must be equal.
in	Allows a list of equals to be used, like the "in" operator in a database . This is often used with enumerations, so you can get a list with two or more values in a list of enumerations. Value for the in operator must be: 'val1_val2_val3' where _ is the separator between values.

### Query Syntax

To query with a GET of all elements, the query parameter is "filter". This is a list of properties and the operator and value to evaluate, in the format: property( operator:value ). Invalid properties will be ignored, and valid properties will be processed. They will be ordered as provided on the property list, with the first property added first to the filter query.

The following example syntax of filtering on a property called *prop1*, using the "like" operator with *value* denoting the value you provide, and also sorting on a property called *prop2*, using the "eq" parameter and a value for *val2*:

```
https://cloudpathServer/admin/apiv2/apiKey/resource?filter=prop1(like:value),prop2(eq:val2)
```

For an example of a query, including appending the URI with the filter parameter, see [Example of Filtering a GET Call](#) on page 55.

## Return Codes and Error Response Format

The API returns an error response code if something has gone wrong with the request.

The following tables provide the basic components of an error message and the meaning of the various codes.

## Basic Parts of an Error Message

**TABLE 5** Error Message Components

Property Name	Type	Description
message	String	A message providing additional details about the error.
code	String	The HTTP return code. The response will return this code, but you can also obtain this code from the resource.
uri	String	The URI that made the request that generated the error.

## Common Return Codes and Their Meaning

**TABLE 6** Codes and Meaning

Code	Meaning
200	"OK" - The response for almost all successful GET requests, and most PUT requests.
201	"Created" - The response for a POST if the resource requested was created.
204	No Content - This will only occur after the deletion of a resource.
400	"Bad Request" - Occurs when the parameters or body required in the method were not correctly provided. This includes missing headers (such as <code>ContentType=application/json</code> ) on a POST and PUT.
401	"Not Authorized" - Occurs if the token is invalid (not expired) or has not been provided. This can also occur if the user does not have an Admin role on the account that is associated with the API key. In addition, providing incorrect credentials on the POST <code>/token</code> will generate this error.
404-	"Not Found" - Occurs if the item requested or any resource identified in the URI does not exist in the Cloudpath account.
406 -	"Not Acceptable" - Occurs if the token has expired. This error is possible on any endpoint, except the POST on <code>/token</code> .
409-	"Conflict" - Occurs when the request itself is valid, but the data in the request causes a conflict with existing data. A common example is if the name is not unique.
415	"Unsupported Media Type" - the REST v2 APIs support only JSON.
4**, 500, 503	Several other errors might occur. The error response should provide additional details as to the issue.



# Core Cloudpath APIs

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## Authentication Servers and Related Resources

### Authentication Servers

You can use REST API v2 calls to obtain information about all the authentication servers being used on your Cloudpath system.

The following table lists the properties that can be used in the body of an authentication server-related request and/or are provided in the response body. (In the "Optional" column, if a default value is applicable, it is listed in angle brackets (< >).)

**TABLE 7** Resource: **Authentication Server**

Property Name	Type	Editable	Sort/Filter	Optional in Request/Response Body?	Description
guid	String	No	sortBy, like	No	The unique identifier for this authentication server.
name	String	Yes	sortBy, like	No	The unique reference name of the authentication server.
detail	Object <Embedded>	Yes	See Object type for details	No	Indicates the details of the authentication server and its custom properties, especially "type" (such as AD, LDAP, OATUH, CUSTOM_OAUTH, RADIUS, and SAML)
adminLogin	Boolean	Yes	sortBy	No	Indicates if this authentication server should allow administration login to Cloudpath.
adminLoginRegex	String	Yes	sortBy, like	No	Users logging to Cloudpath using this authentication server will be required to belong to a group that matches this regex.
sponsorLogin	Boolean	Yes	sortBy,	No	Indicates if this authentication server should allow users to log into the sponsor portal.
useVlanRange	Boolean	Yes	sortBy	No	Indicates whether to allow a user on this authentication server to be assigned a configured auto vlan.
links[]	Link array	No	No	No	Includes a self-referencing link, and links to associated users and groups.

**TABLE 8 Resource: Certificate**

Property Name	Type	Editable	Sort/Filter	Optional in Request/Response Body?	Description
style	Enum <String>	NO	none	NO	One of the following: PIN, CHAIN, UNCHANGED, NONE or BLOCK
serverName	String	NO	none	Yes	The server name from the provided X509 certificate.
issuer	List<String>	No	none	Yes	The list of issuers from the provided X509 certificate. The list of issuers depends on the chain or pin of the certificate.
startDate	Date<String>	No	none	Yes	ISO8601 Date – The start date from the provided X509 certificate.
endDate	Date<String>	No	none	Yes	ISO8601 Date - The end date from the provided X509 certificate.

**TABLE 9 Resource: Detail**

Property Name	Type	Editable	Sort/Filter	Optional in Request/Response Body?	Description
type	String <ENUM>	No	sortBy, eq	No	Indicates the type of authentication server and its custom properties: AD, LDAP, OATUH, RADIUS, and SAML.
activeDirectory	Object <Embedded>	No	See resource.	Yes; cannot be combined with any other type.	The details needed for an active directory identity manager.
ldap	Object <Embedded>	No	See resource.	Yes; cannot be combined with any other type.	The details needed for an ldap identity manager.
saml	Object <Embedded>	No	See resource.	Yes; cannot be combined with any other type.	The details needed for a saml identity manager.
radius	Object <Embedded>	No	See resource.	Yes; cannot be combined with any other type.	The details needed for a radius to act as the identity manager.
facebookOauth	Object <Embedded>	No	See resource.	Yes; can be combined with LinkedIn, Google and custom.	The details needed to use Facebook Oauth.
linkedinOauth	Object <Embedded>	No	See resource.	Yes; can be combined with Facebook, Google, and custom.	The details needed to use Linked In Oauth.
googleOauth	Object <Embedded>	No	See resource.	Yes; can be combined with Facebook, LinkedIn and custom,	The details needed to use Google Oauth.
customOauth	Object <Embedded>	No	See resource.	Yes; can be combined with Facebook, Google and LinkedIn.	The details needed to use a custom oauth.

**TABLE 10** Resource: ldap

Property Name	Type	Editable	Sort/Filter	Optional in Request/Response Body?	Description
host	String	Yes	sortBy, like	No	The DNS/IP of the Active Directory server. For example: <a href="ldap://172.16.4.2">ldap://172.16.4.2</a>
svrDistinguishedName	String	Yes	sortBy, like	No	The DN of the domain. For example: dc=test,dc=sample,dc=local
bindCredentialsType	String <ENUM>	Yes	none	No	USER, ADMININSTRATOR
bindUsername	String	Yes	none	Yes, but required if checkOcsp=true	The username used to bind to the LDAP server. For example, uid=bob,cn=users,dc=test,dc=cloudpath,dc=local. Required if OCSF has been selected
bindPassword	String	Yes	none	Yes, but required if checkOcsp=true	The password used to bind to the LDAP server.
checkOcsp	Boolean	Yes	none	No; default is "false".	If true, LDAP is queried during subsequent uses of the certificate to verify that the user account is still enabled.
ocspStatusFrequency	Number	Yes	none	No; defaults to 24 hrs	The number of milliseconds between rechecks of LDAP. For example, 86400000 (one day) will cause the system to check LDAP and then cache that answer for one day before checking again. 3600000 is one hour. 60000 is one minute.
searchFilter	String	Yes	none	No	LDAP search filter. In AD, this is (&(objectClass=user)(sAMAccountName={0})) or (&(objectClass=user)(userPrincipalName={0})).
searchCn	String	Yes	none	Yes	This is (&(objectCategory=group)(cn={0})).
domain	String	Yes	sortBy, like	Yes	The name of the domain. For example: test.sample.local
commonName	String	Yes	none	Yes	This is cn.
distinguishedName	String	Yes	none	Yes	This is dn
memberOf	String	Yes	none	Yes	This is memberOf.
mail	String	Yes	none	Yes	This is mail.
firstName	String	Yes	none	Yes	The first name. "gn"
lastName	String	Yes	none	Yes	The last name. "sn"
city	String	Yes	none	Yes	This is "l" in Ldap
state	String	Yes	none	Yes	This is the state "s" in Ldap
country	String	Yes	none	Yes	This is the country "c" in Ldap
ou	String	Yes	none	Yes	The Ldap "ou"
company	String	Yes	none	Yes	The company
department	String	Yes	none	Yes	The department
officeName	String	Yes	none	Yes	The office name
stripName	Boolean	Yes	none	Yes; default is true	If true, the username is stripped of the domain before being used in search queries.

**TABLE 11** Resource: saml

Property Name	Type	Editable	Sort/Filter	Optional in Request/Response Body?	Description
ipEntityId	String	Yes	sortBy, like	No	IdP Entity ID; this should match the value of the entityID attribute of the EntityDescriptor element within the IdP metadata XML.
spEntityId	String	Yes	sortBy, like	No	URI that uniquely identifies this Cloudpath authentication server configuration as a Service Provider (SP) to the IdP. This becomes the entityID attribute of the EntityDescriptor element within the SP metadata XML that will be uploaded to the IdP. The required format may vary by IdP.
metaType	String<Enum >	Yes	sortBy, like	No	IdP Metadata Type, which is how Cloudpath obtains IdP metadata -- either periodically fetched remotely from the HTTP URL or locally configured static. One of: XML.URL, STATIC_XML
metaUrl	String	Yes	none	No (if metaType=URL)	IdP Metadata URL, URL of SAML Metadata XML for the Identity Provider (IdP).
metaXml	String	Yes	none	No (if metaType=XML)	IdP Metadata XML; SAML Metadata for the Identity Provider (IdP) as static XML.
idpSsoBinding	String<Enum >	Yes	sortBy, like	No; default is REDIRECT.	REDIRECT or POST
assertionConsumer	String<Enum >	Yes	none	No; default is POST.	REDIRECT or POST
spAuthRequestsSigned	boolean	Yes	none	No; default= true	Returns "true" if the Sml request is signed, and "false" if the Sml request is not signed.
comparisonType	String<Enum >	Yes	none	No; default is MINIMUM	EXACT, MINIMUM, MAXIMUM, or BETTER
socketTimount	number	Yes	none	No; default is 10000.	Milliseconds for the socket timeout
encryptionSource	String<Enum >	Yes	none	No; Enum is: SERVER_WWW_CERT, CUSTOM_SPECIFIED	SP Encryption Certificate Source; defines certificate used for encryption by the local Service Provider (SP). This relates to the encryption certificate public key element within the SP metadata XML that will be uploaded to the IdP. Any changes to this certificate require SP Metadata to be re-generated and re-uploaded to the IdP.
signingSource	String<Enum >	Yes	none	NO; Enum is: SERVER_WWW_CERT, CUSTOM_SPECIFIED	SP Signing Certificate Source; defines certificate used for signing by the local Service Provider (SP). This relates to the signing certificate public key element within the SP metadata XML that will be uploaded to the IdP. Any changes to this certificate require SP Metadata to be re-generated and re-uploaded to the IdP.
username	String	Yes	none	Yes	Friendly Name of SAML Attribute to map to Username.
commonName	String	Yes	none	Yes	Friendly Name of SAML Attribute to map to Common Name.
memberOf	String	Yes	none	Yes	Friendly Name of SAML Attribute to map to Affiliation/ Group Attribute. The value(s) of this attribute are processed as the user's Groups within Cloudpath.
ou	String	Yes	none	Yes	Friendly Name of SAML Attribute to map to OU.
distinguishedName	String	Yes	none	Yes	Friendly Name of SAML. Attribute to map to Distinguished Name.
email	String	Yes	none	Yes	Friendly Name of SAML. Attribute to map to Email.



**TABLE 11** Resource: saml (continued)

Property Name	Type	Editable	Sort/Filter	Optional in Request/Response Body?	Description
firstName	String	Yes	none	Yes	Friendly Name of SAML. Attribute to map to First Name.
lastName	String	Yes	none	Yes	Friendly Name of SAML. Attribute to map to Last Name.
city	String	Yes	none	Yes	Friendly Name of SAML. Attribute to map to City.
state	String	Yes	none	Yes	Friendly Name of SAML. Attribute to map to State.
country	String	Yes	none	Yes	Friendly Name of SAML. Attribute to map to Country.
company	String	Yes	none	Yes	Friendly Name of SAML. Attribute to map to Company.
department	String	Yes	none	Yes	Friendly Name of SAML. Attribute to map to Department.
officeName	String	Yes	none	Yes	Friendly Name of SAML. Attribute to map to OfficeName.

**TABLE 12** Resource: radius

Property Name	Type	Editable	Sort/Filter	Optional in Request/Response Body?	Description
ipAddress	String	Yes	sortBy, like	NO	The DNS hostname ( <a href="#">radius.company.com</a> ) or IP address of the RADIUS server.
port	number	Yes	sortBy	NO	The port on which the RADIUS server listens. This is typically port 1812.
sharedSecret	String	Yes	none	NO	The shared secret that permits the system to communicate with the RADIUS server. If this secret is incorrect, passwords will be corrupted during the RADIUS authentication.
callingStationId	String	Yes	sortBy, like	Yes	This value will be used as the Called-Station-Id attribute in the request. The Called Station ID is the identifier of the AP or controller. Typically, this the MAC address of the AP in ASCII format, which is appended to the Access-Request.
socketTimeout	number	Yes	none	Yes; default is 3000 (milliseconds)	The number of milliseconds to wait for the RADIUS server to respond to authentication requests. Default value of 3000 milliseconds (3 seconds) is appropriate in most cases.

**TABLE 13** Resource: activeDirectory

Property Name	Type	Editable	Sort/Filter	Optional in Request/Response Body?	Description
defaultDomain	String	Yes	sortBy, like	No	If a user does not specify a domain within the username, this Active Directory domain is used. For example, if this value is set to 'test.sample.local' and a user tries to login as 'bob', the login is converted to 'bob@test.sample.local'. But, if the user logs in as 'bob@other.local', this value is not applied.
host	String	Yes	sortBy, like	No	The DNS/IP of the Active Directory server. Example: <a href="#">ldap://hostabc.example.com</a> or <a href="#">ldap://172.16.4.2</a> . Use the fully qualified DNS name of the AD server for PEAP authentication.
distinguishedName	String	Yes	sortBy, like	No	The DN of the Active Directory domain. Example: dc=test,dc=sample,dc=local

**TABLE 13** Resource: activeDirectory (continued)

Property Name	Type	Editable	Sort/Filter	Optional in Request/Response Body?	Description
searchBasis	String <Enum>	Yes	none	No, defaults to "SAM"	The attribute in Active Directory against which the username gets compared: SAM, UPN, NONE
checkOosp	Boolean	Yes	none	No; default is "false"	If "true," Active Directory gets queried during subsequent uses of the certificate to verify that the user account is still enabled.
ocspStatusFrequency	Number	Yes	none	No; defaults to 24 hrs	The number of milliseconds to between rechecks of Active Directory. For example, 86400000 (one day) causes the system to check Active Directory and then cache that answer for one day before checking again. 3600000 is one hour. 60000 is one minute.
bindUsername	String	Yes	none	Yes, but required if checkOosp=true	If specified, the bind credentials are used to lookup account status during subsequent uses of the certificate. The bind username must be fully specified, either as a SAM account name (such as TEST\bob) or a UPN (bob@test.com).
bindPassword	String	Yes	none	Yes, but required if checkOosp=true	If specified, the bind credentials are used to lookup account status during subsequent uses of the certificate.
enabledForPeap	Boolean	NO	none	No; default is "false"	Indicates whether this active directory has been set up with PEAP. PEAP can be enabled from the Cloudpath UI.

**TABLE 14** Resource: facebookOauth

Property Name	Type	Editable	Sort/Filter	Optional in Request/Response Body?	Description
appld	String	Yes	none	No	The app ID for Facebook.
secret	String	Yes	none	No	The secret for Facebook.
scope	String	Yes	none	Yes	The scope for Facebook. If entering multiple scopes, use a comma-separated list..

**TABLE 15** Resource: linkedInOauth

Property Name	Type	Editable	Sort/Filter	Optional in Request/Response Body?	Description
apiKey	String	Yes	none	No	The API key for LinkedIn.
secret	String	Yes	none	No	The API secret needed for LinkedIn.

**TABLE 16** Resource: googleOauth

Property Name	Type	Editable	Sort/Filter	Optional in Request/Response Body?	Description
clientId	String	Yes	none	No	The Client ID for Google.
clientSecret	String	Yes	none	No	The Client secret for Google.

**TABLE 17** Resource: **customAuth**

Property Name	Type	Editable	Sort/Filter	Optional in Request/Response Body?	Description
name	String	Yes	none	Yes	The name to display to the end-user for the custom OAuth server.
description	String	Yes	none	Yes	The description to display to the end-user for the custom OAuth server.
consumerKey	String	Yes	none	Yes	The consumer key, similar to a username or API key, that identifies this server to the OAuth server.
consumerSecret	String	Yes	none	Yes	The consumer secret or password that identifies this server to the OAuth server.
accessTokenUrl	String	Yes	none	Yes	The access token endpoint URL for the OAuth server. For example, the Google URL is: <a href="https://www.googleapis.com/oauth2/v4/token">https://www.googleapis.com/oauth2/v4/token</a> .
authorizeUrl	String	Yes	none	Yes	The authorize URL for the OAuth server. For example, the Google authorize URL is: <a href="https://accounts.google.com/o/oauth2/auth">https://accounts.google.com/o/oauth2/auth</a> .
dataUrl	String	Yes	none	Yes	The data URL for the OAuth server. For example, the Google URL is: <a href="https://www.googleapis.com/oauth2/v2/userinfo">https://www.googleapis.com/oauth2/v2/userinfo</a> .
scope	String	Yes	none	Yes	The scope to send to the OAuth server. Each scope should be separated by a space. For example, the Google scopes are: <b>profile email</b> .

### Authentication Servers URIs and Actions

The following table indicates the URIs that you can append to the root URI, along with the actions you can take, and possible return codes you can receive.

**TABLE 18** Authentication Servers URIs and Actions

URI	Action	Description	Return Codes
/authenticationServers	GET	Returns the list of all authentication servers in the Cloudpath system.	401 - Unauthorized 200 - Ok
/authenticationServers/{id}	GET	Returns details about the specified authentication server.	404 - Not found 401 - Unauthorized 200 - Ok

### Example of Using GET for Information About All Authentication Servers

This example demonstrates how to obtain information about all authentication servers on your Cloudpath system.

**URI:**

This example uses the following URI:

```
https://Jeff245.cloudpath.net/admin/apiv2/yRCjJObWR6ER/authenticationServers
```

where:

- <https://Jeff245.cloudpath.net/admin/apiv2> is the root URI of the Cloudpath system being used (must include https, as shown)
- yRCjJObWR6ER is an example of an API key generated from the **Configuration > API Keys** section of the Cloudpath UI

**Request Headers:**

The following table shows the required request headers for this URI example, with an example value of an active token that must be pasted into the Authorization header value:

**TABLE 19** Request Headers

Key	Value
Content-type	application/json
Authorization	eyJhbGciOiJIUzI1NiIsInR5cGU6IjY9Iiwicm9sZVBrIjoieWVMDAilLCjY2NvdW50QWRtaW5QayI6IjIiLCJhcGILZXRkiOiJaV2NjTjGpQZUdZMGUilLCjYXQiOiE1NzU1NzUxNTcslmV4Cl6MTU3NTU3NTQ1N30.2q4KTyDUevkAAz7mJyp529Be1-ip3EC8P06Xarmz5ao

**Request Body:**

None required.

**Action:**

Use the **GET** action to send the request.

**Response Body:**

Once the request is sent, you will receive a "Status: 200 OK" if the GET is successful. The response body provides information about all existing authentication servers, which, in this example, shows one Active Directory server and one onboard RADIUS server.

```
{
  "page": {
    "page": 1,
    "pageSize": 2,
    "totalCount": 2
  },
  "contents": [
    {
      "guid": "1",
      "name": "Jack Test AD",
      "detail": {
        "type": "ACTIVE_DIRECTORY",
        "activeDirectory": {
          "defaultDomain": "demo.sample.local",
          "host": "ldaps://192.168.4.170",
          "distinguishedName": "dc=demo,dc=sample,dc=local",
          "searchBasis": "SAM",
          "checkOcsp": false,
          "ocspStatusFrequency": 86400000,
          "bindUsername": "",
          "bindPassword": "",
          "enabledForPeap": false
        }
      },
      "adminLogin": false,
      "sponsorLogin": true,
      "useVlanRange": false,
      "adminLoginRegex": "",
      "links": [
        {
          "rel": "self",
          "href": "https://jeff245.cloudpath.net/admin/apiv2/yRCjJObWR6ER/authenticationServers/1",
          "hreflang": null,
          "media": null,
          "title": null,
          "type": null,
          "deprecation": null
        },
        {
          "rel": "groups",
```

```

        "href": "https://jeff245.cloudpath.net/admin/apiv2/yRCjJObWR6ER/authenticationServers/1/
groups?page=1&pageSize=10{&filter,orderBy}",
        "hreflang": null,
        "media": null,
        "title": null,
        "type": null,
        "deprecation": null
    },
    {
        "rel": "users",
        "href": "/apiv2/yRCjJObWR6ER/authenticationServers/1/users",
        "hreflang": null,
        "media": null,
        "title": null,
        "type": null,
        "deprecation": null
    }
]
},
{
    "guid": "2",
    "name": "Jack Test DB",
    "detail": {
        "type": "ONBOARD"
    },
    "adminLogin": false,
    "sponsorLogin": true,
    "useVlanRange": false,
    "adminLoginRegex": "",
    "links": [
        {
            "rel": "self",
            "href": "https://jeff245.cloudpath.net/admin/apiv2/yRCjJObWR6ER/authenticationServers/
2",
            "hreflang": null,
            "media": null,
            "title": null,
            "type": null,
            "deprecation": null
        },
        {
            "rel": "groups",
            "href": "https://jeff245.cloudpath.net/admin/apiv2/yRCjJObWR6ER/authenticationServers/2/
groups?page=1&pageSize=10{&filter,orderBy}",
            "hreflang": null,
            "media": null,
            "title": null,
            "type": null,
            "deprecation": null
        },
        {
            "rel": "users",
            "href": "/apiv2/yRCjJObWR6ER/authenticationServers/2/users",
            "hreflang": null,
            "media": null,
            "title": null,
            "type": null,
            "deprecation": null
        }
    ]
}
]
}

```

## Authentication Groups

You can use REST API v2 calls to obtain information about existing authentication groups.

The following table lists the properties that can be used in the body of an authentication groups-related request and/or are provided in the response body. (In the "Optional" column, if a default value is applicable, it is listed in angle brackets (< >).

**TABLE 20** Resource: Group

Property Name	Type	Editable	Sort/Filter	Optional in Request/Response Body?	Description
guid	String	No	Neither	No	The unique identifier for this authentication group.
name	String	No	sortBy, like	No	The unique reference name of the authentication group.
cn	String	No	sortBy, like	Yes	The common name for this authentication group. Not all authentication servers support this as "CN"; refer to your authentication-server documentation for information about mapping server type into authentication groups.
dn	String	No	sortBy, like	Yes	The distinguished name for this authentication group. Not all authentication servers support this as "DN"; refer to your authentication-server documentation for information about mapping server type into authentication groups.
type	String	No	sortBy, like	Yes	The type of authentication group. Not all authentication servers support a group type. Refer to your authentication-server documentation for information about mapping server type into authentication groups.
links[]	Link array	No	No	No	Self-referencing link, parent (authenticationServers)

### Group URIs and Actions

The following table indicates the URIs that you can append to the root URI, along with the actions you can take, and possible return codes you can receive.

**TABLE 21** Group URIs and Actions

URI	Action	Description	Return Codes
/authenticationServers/{authServerGuid}/groups	GET	Lists the authentication groups that have been found on this authentication server.	404 - Not found 401 - Unauthorized 200 - Ok
/authenticationServers/{authServerGuid}/groups/{guid}	GET	Lists details about the specified authentication group within a specified authentication server.	404 - Not found 401 - Unauthorized 200 - Ok

## Authentication Server Users

You can use REST API v2 calls to obtain information about Cloudpath users in an authentication server as well as to update information about specific users.

The following table lists the properties that can be used in the body of a user-related request and/or are provided in the response body. (In the "Optional" column, if a default value is applicable, it is listed in angle brackets (< >).

**TABLE 22** Resource: Users

Property Name	Type	Editable	Sort/Filter	Optional in Request/Response Body?	Description
guid	String	No	Neither	No*	The unique identifier for this user.
name	String	No	sortBy, like	No	The unique reference name for this user.
status	enum <String>	Yes	sortBy, eq	No	The status of this user. Can be: ACTIVE, BLOCKED, REVOKE_ENROLLMENTS  BLOCKED prevents a user from authenticating, and blocks all existing enrollments.  REVOKE_ENROLLMENTS revokes all existing enrollments for this user. However, the status of the user does not change; therefore, if this user is active, the user could create a new enrollment.
blockReason	String	Yes	None	Yes	Will be set if the user's status is changes to BLOCKED or REVOKE_ENROLLMENTS.
firstName	String	No	sortBy, like	No	Provided by the authentication server during the authentication process.
lastName	String	No	sortBy, like	No	Provided by the authentication server during the authentication process.
email	String	No	sortBy, like	No	Provided by the authentication server during the authentication process.
commonName	String	No	sortBy, like	No	Provided by the authentication server during the authentication process.
distinguishedName	String	No	sortBy, like	No	Provided by the authentication server during the authentication process.
officeName	String	No	sortBy, like	No	Provided by the authentication server during the authentication process.
company	String	No	sortBy, like	No	Provided by the authentication server during the authentication process.
department	String	No	sortBy, like	No	Provided by the authentication server during the authentication process.
ou	String	No	sortBy, like	No	Provided by the authentication server during the authentication process.
city	String	No	sortBy, like	No	Provided by the authentication server during the authentication process.
state	String	No	sortBy, like	No	Provided by the authentication server during the authentication process.
country	String	No	sortBy, like	No	Provided by the authentication server during the authentication process.
oauthType	Enum <String>	No	sortBy, like	No	Indicates the type of authentication that this user followed: ACTIVE_DIRECTORY, LDAP, FACEBOOK, LINKEDIN, GOOGLE, SAML, or CUSTOM
lastPeapAuthDate	DateTime	No	sortBy,	Yes	The most recent date that this user authenticated through PEAP.
lastAssignedPolicy	String	No	sortBy, like	No	The name of the policy most recently applied to this user.
automaticVlan	Long	No	sortBy,	No	The automatic vlan assigned to the user if enabled on the authentication server.
links[]	Link array	Yes*	No	No	Self-referencing link, enrollments, parent (authenticationServer), groups

## Users URIs and Actions

The following table indicates the URIs that you can append to the root URI, along with the actions you can take, and possible return codes you can receive.

**TABLE 23** Users URIs and Actions

URI	Action	Description	Return Codes
/authenticationServers/{authSvrId}/users	GET	Returns the list of Cloudpath users on this authentication server.	404 - Not found 401 - Unauthorized 200 - Ok
/authenticationServers/{authSvrId}/users/{id}	GET	Returns details about the specified Cloudpath user on the authentication server.	404 - Not found 401 - Unauthorized 200 - Ok
	PUT	Updates the specified Cloudpath user on the authentication server.	409 - Conflict 404 - Not found 401 - Unauthorized 200 - Ok
/authenticationServers/{authSvrId}/users/{id}/groups	GET	Returns the list of authentication groups that the specified authentication-server user belongs to within the specified authentication server.	404 - Not found 401 - Unauthorized 200 - Ok

## RADIUS Attribute Groups

You can use REST API v2 calls to obtain information about existing RADIUS attribute groups, to create or edit RADIUS attribute groups, and to delete RADIUS attribute groups.

The following table lists the properties that can be used in the body of a RADIUS attribute groups-related request and/or are provided in the response body. (In the "Optional" column, if a default value is applicable, it is listed in angle brackets (< >)).

**TABLE 24** Resource: RadiusAttributeGroup

Property Name	Type	Editable	Filter/Sort	Optional in Request/Response Body?	Description
guid	String	No	Neither	Optional on create only, but not on any subsequent uses	The unique identifier for this attribute group.
name	String	Yes	Filter	No	The display name for this attribute group; must be unique.
description	String	Yes	Neither	Yes	A description for this attribute group.
vlanid	String	Yes	Neither	Yes	The VLAN to use. If not specified, the device receives the default VLAN that is configured on the controller.
classid	String	Yes	Neither	Yes	The device class ID to use. If not specified, the device is not assigned a class ID.
filterid	String	Yes	Neither	Yes	Filter ID for the device in the attribute group. If not specified, the device is not assigned a filter ID.



**TABLE 24** Resource: RadiusAttributeGroup (continued)

Property Name	Type	Editable	Filter/Sort	Optional in Request/Response Body?	Description
sessionTimeout	Long	Yes		No	The reauthentication period, in seconds, that is included in the RADIUS reply for successful authentications. If the device stays connected for longer than this period, the WLAN or switch requires that the device be reauthenticated (unbeknownst to the user). If no value is specified, the sessionTimeout is not applied, which means that the device is not required to reauthenticate as long as it remains associated to the WLAN or switch.
policyCount	Integer	No	Yes	Yes	The number of policies that are currently using this attribute group. This number cannot be altered, and any attempt to do so is ignored.
additionalAttributes	List <Attribute>	Yes		Yes	A list of additional attributes to apply to RADIUS configurations. In the <b>Configuration &gt; Policies &gt; Radius Attribute Groups</b> portion of the UI, if you add or modify a RADIUS attribute group, you can click + at the bottom of the Attributes section to invoke a drop-down of all the additional attributes that are available. Also, see the "Resource: Attribute" table below for more information.
links	Link	No	No	No	A self reference href link is created that can be used in other API calls where a reference to a specific RADIUS attribute group is needed, such as in a POST to create a new policy.

**Additional Attributes:**

The following table lists the additional-attribute properties to apply to RADIUS configurations that can be used in the body of a DPSK-pool-related request and/or are provided in the response body.

**TABLE 25** Resource: Attribute

Property Name	Type	Editable	Filter or Sort	Optional?	Description
name	String	Yes	No	No	The RADIUS attribute to use.
action	String <Enum>	Yes	No	No	The action to take must be one of the following: ADD, ADD_OR_REPLACE, or ADD_MULTIPLE.
value	String	Yes	No	No	The value to substitute.

## RADIUS Attribute Groups URIs and Actions

The following table indicates the URIs that you can append to the root URI, along with the actions you can take, and possible return codes you can receive.

**TABLE 26** RADIUS Attribute Groups URIs and Actions

URI	Action	Description	Return Codes
/radiusAttributeGroups	GET	Returns the list of RADIUS attribute groups defined.	401 - Unauthorized 200 - OK
	POST	Creates a RADIUS attribute group.	401 - Unauthorized 201 - Created

**TABLE 26** RADIUS Attribute Groups URIs and Actions (continued)

URI	Action	Description	Return Codes
/radiusAttributeGroups/{id}	GET	Returns the specific RADIUS attribute group.	404 - Not Found 401 - Unauthorized 200 - OK
	DELETE	Deletes the RADIUS attribute group specified. If the attribute group is assigned to one or more policies, and a request to delete the group is sent, the response will be a "409" message.	409 - Conflict 401 - Unauthorized 204 - No content 200 - OK
	PUT	Updates a RADIUS attribute group. See the "Resource: RADIUS Attribute Groups" table for the properties that can be edited.	409 - Conflict 401 - Unauthorized 204 - No content 200 - OK

## Example of Using POST to Create a RADIUS Attribute Group

This example demonstrates how to create a new RADIUS attribute group in your Cloudpath system by using the REST API POST call.

### URI:

This example uses the following URI:

```
https://Jeff243.cloudpath.net/admin/apiv2/5XcTc6SjkHDL/radiusAttributeGroups
```

where:

- https://Jeff243.cloudpath.net/admin/apiv2 is the root URI of the Cloudpath system being used (must include https, as shown)
- 5XcTc6SjkHDL is an example of an API key generated from the **Configuration > API Keys** section of the Cloudpath UI

### Request Headers:

The following table shows the required request headers for this URI example, with an example value of an active token that must be pasted into the Authorization header value:

**TABLE 27** Request Headers

Key	Value
Content-type	application/json
Authorization	eyJhbGciOiJIUzI1NiJ9.eyJzdWUiOiJqZWZmLnJob2RpZUBjb21tc2NvcGUuY29tIiwicm9sZVBrIjoiaWJwMDAiLCJhY2NvdW50QWRtaW50Qayl6ljlIiLCJhcGILZkxiOiJaV2NjTGpQZUdZMGUuIiwiOiJpYXQiOiJlNzU1NzUxNTcsmV4cCl6MTU3NTU3NTQ1N30.2q4KTyDUevkAAz7mJyp529Be1-ip3EC8P06Xarmz5ao

### Request Body:

The following is an example of a request body for creating a RADIUS attribute group. You can refer to the preceding Resource tables for a list and descriptions of properties you can use to define your RADIUS attribute group. For instance, in this example, a RADIUS attribute group called "RadGroup22" is being created with the values provided in the body.

```
{
  "name": "RadGroup22",
  "description": "test group",
  "vlanid": "10",
  "filterid": 15,
```

```
"sessionTimeout": 333
}
```

**Action:**

Use the **POST** action to send the request.

**Response Body:**

Once the request is sent, you will receive a "Status: 201 Created" if the POST is successful. You can see that a "guid" (a unique identifier for the newly created RADIUS attribute group) is included in the response body.

```
{
  "guid": "1",
  "name": "RadGroup22",
  "description": "test group",
  "vlanid": "10",
  "filterid": "15",
  "classid": null,
  "sessionTimeout": "333",
  "policyCount": 0,
  "additionalAttributes": [],
  "links": [
    {
      "rel": "self",
      "href": "https://jeff243.cloudpath.net/admin/apiv2/5XcTc6SjkHDL/radiusAttributeGroups/1",
      "hreflang": null,
      "media": null,
      "title": null,
      "type": null,
      "deprecation": null
    }
  ]
}
```

## RADIUS Clients

You can use REST API v2 calls to obtain information about existing RADIUS clients.

The following table lists the properties that can be used in the body of a RADIUS client-related request and/or are provided in the response body. (In the "Optional" column, if a default value is applicable, it is listed in angle brackets (< >)).

**TABLE 28** Resource: RADIUS Clients

Property Name	Type	Editable	Filter/Sort	Optional in Request/Response Body?	Description
guid	String	No	Neither	Optional on create only, but not on any subsequent uses	The unique identifier for this RADIUS client.
referenceName	String	Yes	Neither	No	The display name for this RADIUS client, must be unique
ipAddress	String	Yes	Neither	No	IP address of the RADIUS client.
enabled	Boolean	Yes	Neither	No (true by default)	If enabled, the client is available for use. If disabled, the client is not available for use.
sharedSecret	String	Yes	Neither	NO	The shared secret for this RADIUS client.
changeOfAuthority	<Object> Embedded	Yes	Neither	Yes	Change of Authority embedded object. If not present, COA has not been enabled; if present COA is enabled.
links	Link	No	No	No	A self reference href link is created. This link can be used in other API calls, such as within the "rule" section of a POST call to create a policy.

**TABLE 29** Resource:ChangeOfAuthority

Property Name	Type	Editable	Filter/Sort	Optional in Request/Response Body?	Description
port	Long	No	Neither	Optional on create only, but not on any subsequent uses	COA usually uses port 3799 in typical configurations and 2083 in RADSEC configurations. Some Cisco equipment uses port 1700.
macAddressFormat	Enum	Yes	Filter	No	COA MAC Address Format - MAC Addresses within attributes such as value of 'Calling-Station-Id' will be sent in this format. Enumeration values accepted are: <ul style="list-style-type: none"> <li>• COLON_6_GROUPS (XX:XX:XX:XX:XX:XX)</li> <li>• HYPHEN_2_GROUPS (XXXXXX-XXXXXX)</li> <li>• HYPHEN_6_GROUPS (XX-XX-XX-XX-XX-XX)</li> <li>• DOT (XXXX.XXXX.XXXX)</li> <li>• NONE(XXXXXXXXXXXXXX)</li> </ul>
disconnectAttributes	List	Yes	Neither	Yes	A list of additional attributes to apply to radius configurations during the disconnect from the RADIUS client. Refer to <a href="#">Table 25</a> on page 25.
portForwardList	List	Yes	Neither	Yes	This list should only be provided if port forwarding is required to reach the switches or controllers. By default, the system sends COA requests to the switch or controller on the default port (3799).You can enable this option by providing at least one value in the portForward list. Refer to the "Resource: portForward" table that follows.

**TABLE 30** Resource:portForward

Property Name	Type	Editable	Filter/Sort	Optional in Request/Response Body?	Description
nasIpAddress	String	Yes	Neither	No	The NAS Ip address for forwarding.
port	Long	Yes	Neither	No	The port number for forwarding
sharedSecret	String	Yes	Neither	No	The shared secret to use for this NAS IP.

## RADIUS Clients URIs and Actions

The following table indicates the URIs that you can append to the root URI, along with the actions you can take, and possible return codes you can receive.

**TABLE 31** RADIUS Clients

URI	Action	Description	Return Codes
/radius/clients	GET	Returns the list of RADIUS clients that are defined.	401 - Unauthorized
/radius/clients/{id}	GET	Returns the specific RADIUS client.	404 - Not Found 401 - Unauthorized

## Example of Using GET to Retrieve RADIUS Client Information

This example demonstrates how to obtain information about all RADIUS clients in your Cloudpath system by using the REST API GET call.

**URI:**

This example uses the following URI:

```
https://Jeff243.cloudpath.net/admin/apiv2/5XcTc6SjkHDL/radius/clients/
```

where:

- https://Jeff243.cloudpath.net/admin/apiv2 is the root URI of the Cloudpath system being used (must include https, as shown)
- 5XcTc6SjkHDL is an example of an API key generated from the **Configuration > API Keys** section of the Cloudpath UI

**Request Headers:**

The following table shows the required request headers for this URI example, with an example value of an active token that must be pasted into the Authorization header value:

**TABLE 32** Request Headers

Key	Value
Content-type	application/json
Authorization	eyJhbGciOiJIUzI1NiJ9.eyJzdWUiOiJqZWZmLnJob2RpZUBjb21tc2NvcGUuY29tliwicm9sZVBrJoiMjEwMDAiLCJhY2NvdW50QWRtaW5QayI6IjIiLCJhcGILZXkiOiJaV2NjTGpQZUdZMGUuIlCjYXQiOiE1NzU1NzUxNTcslmV4cCl6MTU3NTU3NTQ1N30.2q4KTyDUevkAAz7mJyp529Be1-ip3EC8P06Xarmz5ao

**Request Body:**

No request body is needed for this request. All the necessary information is in the URI.

**Action:**

Use the **GET** action to send the request.

**Response Body:**

Once the request is sent, you will receive a "Status: 200 OK" if the GET is successful. The example response body below lists information for the specified RADIUS client.

```
{
  "page": {
    "page": 1,
    "pageSize": 1,
    "totalCount": 1
  },
  "contents": [
    {
      "guid": "1",
      "referenceName": "Rad Client 12",
      "ipAddress": "10.0.0.1",
      "enabled": true,
      "sharedSecret": "testtest",
      "changeOfAuthority": {
        "port": 3799,
        "macAddressFormat": "COLON_6_GROUPS",
        "disconnectAttributes": [],
        "portForwardList": []
      },
      "links": [
        {
          "rel": "self",
          "href": "https://jeff243.cloudpath.net/admin/api3v2/5XcTc6SjkHDL/radius/clients/1",
          "hreflang": null,
          "media": null,
          "title": null,
          "type": null,
          "deprecation": null
        }
      ]
    }
  ]
}
```

```

    ]
  }
}

```

## Policies

You can use REST API v2 calls to obtain information about existing policies, to create or edit policies, and to delete policies

The following table lists the properties that can be used in the body of a policy request and/or are provided in the response body. (In the "Optional" column, if a default value is applicable, it is listed in angle brackets (< >).)

**TABLE 33** Resource: Policies

Property Name	Type	Editable	Filter/Sort	Optional in Request/Response Body?	Description
guid	String	No	Neither	Optional on create only, but not on any subsequent uses .	The unique identifier for this policy.
name	String	Yes	sortBy, like	No	The display name for this policy; must be unique.
description	String	Yes	sortBy, like	Yes	A string that can be used by third-party consumers. The string can be referenced using RADIUS attribute variables such as: DPSK.THIRDPARTY_ID
rule	<Object> embedded	Yes	Neither	Optional on create only, but not on any subsequent uses .	The rules that are defined for this policy. Refer to the "Resource: rule" table below.
links[]	Link array	Yes	No	No	This is an href link to the RADIUS attribute group property (attributeGroup) being used by the policy. This href can then be used in other API calls.  <b>NOTE</b> You can change the attribute group of a policy by using a PUT request and including the href link to the new attribute group.

**TABLE 34** Resource: rule

Property Name	Type	Editable	Filter or Sort	Optional?	Description
userNameRegex	String	Yes	Neither	Yes	The regex for a user name that will be applied with this policy.
nasIdRegex	String	Yes	Neither	Yes	The regex for the NAS Identifier that will be applied with this policy.
realmRegex	String	Yes	Neither	Yes	The regex for the realm that will be applied with this policy. The realm is defined as "@****" following the user name. For example, with joe.smith@company.com the realm is company.com
dpskRefNameRegex	String	Yes	Neither	Yes	The regex for the DPSK reference name that will be applied with this policy. This value is valid only for eDPSK Pools and is ignored for all other uses.
authGroupRegex	String	Yes	Neither	Yes	The regex for the authentication groups that will be applied with this policy.

**TABLE 34** Resource: rule (continued)

Property Name	Type	Editable	Filter or Sort	Optional?	Description
timeRange	<Object> embedded	Yes	Neither	Yes	The regex for the time range that will be applied with this policy.
links	Link <Object>	Yes	Neither	Yes	<p>This is an href link to the RADIUS client property (radiusClient) if this property is being used by the policy. This href can then be used in the "rule" portion of a request body as in this example (where "234" is the ID of the RADIUS client):</p> <pre> "links": [   {     "rel": "radiusClient",     "href": "https:// somehost.cp.com/radius/client/234"   } ] </pre> <p>Also, refer to <a href="#">RADIUS Clients</a> on page 27.</p>

**TABLE 35** Resource: timeRange

Property Name	Type	Editable	Filter or Sort	Optional?	Description
when	Enum <String>	Yes	Neither	No	When the policy will be applied:WEEKDAY, WEEKEND, ALL
start	String <Time>	Yes	Neither	No	The time specified for this policy to allow access, in ISO 8601 formatted time.
end	String <Time>	Yes	Neither	No	The time specified for this policy to prevent access, in ISO 8601 formatted time.

## Policies URIs and Actions

The following table indicates the URIs that you can append to the root URI, along with the actions you can take, and possible return codes you can receive.

**TABLE 36** Policies URIs and Actions

URI	Action	Description	Return Codes
/policies	GET	Returns the list of policies.	401 - Unauthorized 200 - OK
	POST	Creates a policy.	401 - Unauthorized 201 - Created

**TABLE 36** Policies URIs and Actions (continued)

URI	Action	Description	Return Codes
/policies/{id}	GET	Returns the specific policy.	404 - Not Found 401 - Unauthorized 200 - OK
	DELETE	Deletes the specified policy. If the policy has been assigned to an eDPSK pool or PEAP, you will receive a "conflict" message when trying to delete the policy.	409 - Conflict 401 - Unauthorized 204 - No content 200 - OK
	PUT	Updates the specified policy. See the "Resource: Policies" table for the properties that can be edited.	409 - Conflict 401 - Unauthorized 204 - No content 200 - OK

## Example of Using POST to Create a Policy

This example demonstrates how to create a new policy in your Cloudpath system by using the REST API POST call.

### URI:

This example uses the following URI:

```
https://Jeff243.cloudpath.net/admin/apiv2/5XcTc6SjkHDL/policies
```

where:

- <https://Jeff243.cloudpath.net/admin/apiv2> is the root URI of the Cloudpath system being used (must include https, as shown)
- 5XcTc6SjkHDL is an example of an API key generated from the **Configuration > API Keys** section of the Cloudpath UI

### Request Headers:

The following table shows the required request headers for this URI example, with an example value of an active token that must be pasted into the Authorization header value:

**TABLE 37** Request Headers

Key	Value
Content-type	application/json
Authorization	eyJhbGciOiJIUzI1NiIsInR5cGU6IjY9LmVudW50QWRtaW50Qayl6jIiLCJhcGILZXRkiOiJaV2NjTjGpQZUdZMGUilCjYXQjOjE1NzU1NzUxNTcsmV4cCl6MTU3NTU3NTQ1N30.2q4KTyDUevkAAz7mJyp529Be1-ip3EC8P06Xarmz5ao

### Request Body:

The following is an example of a request body for creating a policy. You can refer to the preceding Resource tables for a list and descriptions of properties you can use to define your policy. For instance, in this example, a policy called "policy2" is being created with the values provided in the body.



**NOTE**

The href link near the end of the request body shown below is the link to the RADIUS attribute group (with its ID, which is 1 in the example link) to be associated with the policy.

```
{
  "name": "Policy2",
  "description": "Test Policy2 using Attribute1 and with userNameRegex and timeRange",
  "rule": {
    "userNameRegex": "user*",
    "nasIdRegex": "Using Attribute",
    "realmRegex": "",
    "dpskRefNameRegex": "",
    "authGroupRegex": "", "links": [],
    "timeRange": {
      "when": "WEEKEND",
      "startTime": "07:45:00",
      "endTime": "16:15:00"
    },
    "links": []
  },
  "links": [
    {
      "rel": "attributeGroup",
      "href": "https://jeff243.cloudpath.net/admin/apiv2/5XcTc6SjkHDL/radiusAttributeGroups/1"
    }
  ]
}
```

**Action:**

Use the **POST** action to send the request.

**Response Body:**

Once the request is sent, you will receive a "Status: 201 Created" if the POST is successful. You can see that a "guid" (a unique identifier for the newly created policy) is included in the response body.

```
{
  "guid": "2",
  "name": "Policy2",
  "description": "Test Policy2 using Attribute1 and with userNameRegex and timeRange",
  "rule": {
    "userNameRegex": "user*",
    "nasIdRegex": "Using Attribute",
    "realmRegex": "",
    "dpskRefNameRegex": "",
    "authGroupRegex": "",
    "timeRange": {
      "when": "WEEKEND",
      "startTime": "07:45:00",
      "endTime": "16:15:00"
    },
    "links": []
  },
  "links": [
    {
      "rel": "self",
      "href": "https://jeff243.cloudpath.net/admin/apiv2/5XcTc6SjkHDL/policies/2",
      "hreflang": null,
      "media": null,
      "title": null,
      "type": null,
      "deprecation": null
    },
    {
      "rel": "attributeGroup",
      "href": "https://jeff243.cloudpath.net/admin/apiv2/5XcTc6SjkHDL/radiusAttributeGroups/1",
      "hreflang": null,
      "media": null,
      "title": null,
    }
  ]
}
```

```

    "type": null,
    "deprecation": null
  }
]
}

```

## DSPK Resources and URIs

### DPSK Pools

You can use REST API v2 calls to obtain information about existing DPSK pools, to create or edit pools, and to delete pools.

The following table lists the properties that can be used in the body of a DPSK-pool-related request and/or are provided in the response body. (In the "Optional" column, if a default value is applicable, it is listed in angle brackets (<>).)

**TABLE 38** Resource: DPSK Pools

Property Name	Type	Editable	Sort/Filter	Optional in Request/Response Body?	Description
guid	String	No	Neither	Optional on create only, but not on any subsequent uses	The unique identifier for this DPSK pool.
additionalAttributes	List <Attribute>	Yes	No	Yes	For Cloudpath releases greater than initial 5.7 release, this property is ignored for this resource. Instead, this property can be specified in a Radius Attributes Group resource. For more information, refer to <a href="#">Table 24</a> on page 24 .
classid	String	Yes	Neither	Yes	For Cloudpath releases greater than initial 5.7 release, this property is ignored for this resource. Instead, this property can be specified in a Radius Attributes Group resource. For more information, refer to <a href="#">Table 24</a> on page 24 .
defaultAccess	String <Enum>	Yes	Neither	No	Default access if there are no policies assigned. Values are either ACCEPT or REJECT. Default value is ACCEPT.
description	String	Yes	Neither	No	A description for this pool.
deviceCountLimit	Int	Yes	Neither	No <1>	If you set the enforceDeviceCountLimit parameter to <i>true</i> , you can specify the number of devices that are allowed to utilize the DPSK pool you are creating.
displayName	String	Yes	Filter	No	The display name for this pool; must be unique.
enabled	Boolean	Yes	Filter	No<true>	Indicates if this DPSK pool is enabled. Switching from true to false disables the pool.
enforceDeviceCountLimit	Boolean	Yes	Neither	No<false>	If true, each DPSK is assigned a maximum device count as specified in the deviceCountLimit parameter. If false, an unlimited number of devices can utilize the DPSK.
enforceExpirationDate	Boolean	Yes	Neither	No <false>	If true, newly generated DPSKs are assigned an expiration date that is based on the creation date and the defined offset.
expirationDateType	String	Yes	Neither	No <END_OF_MONTH >	A Specific date in format YYYYMMDD, or a type of: MINUTES_AFTER_TIME, HOURS_AFTER_TIME, DAYS_AFTER_TIME, WEEKS_AFTER_TIME, MONTHS_AFTER_TIME, QUARTERS_AFTER_TIME, YEARS_AFTER_TIME, END_OF_HOUR, END_OF_DAY, END_OF_WEEK, END_OF_MONTH, END_OF_QUARTER, END_OF_HALF, END_OF_YEAR

**TABLE 38** Resource: DPSK Pools (continued)

Property Name	Type	Editable	Sort/Filter	Optional in Request/Response Body?	Description
expirationDateValue	Int	Yes	Neither	No <1>	Will be used if HOURS_AFTER_TIME is provided in the expirationDataType
filterid	String	Yes	Neither	Yes	For Cloudpath releases greater than initial 5.7 release, this property is ignored for this resource. Instead, this property can be specified in a Radius Attributes Group resource. For more information, refer to <a href="#">Table 24</a> on page 24 .
phraseDefaultLength	int	Yes	Neither	No<12>	The pass phrase default length.
phraseRandomCharactersType	Enum <String>	Yes	Filter	No	An enum that indicates the characters to be included in the passphrase. ALPHANUMERIC_UPPER, ALPHANUMERIC_LOWER, ALPHANUMERIC_MIXED, ALPHABETIC_UPPER, ALPHABETIC_LOWER, ALPHABETIC_MIXED, NUMERIC, ASCII
sessionTimeout	Long	Yes	Neither	No	For Cloudpath releases greater than initial 5.7 release, this property is ignored for this resource. Instead, this property can be specified in a Radius Attributes Group resource. For more information, refer to <a href="#">Table 24</a> on page 24 .
ssidList	List <String>	Yes	Neither	No	A list of SSIDs as strings for this DPSK pool.
vlanid	String	Yes	Neither	Yes	For Cloudpath releases greater than initial 5.7 release, this property is ignored for this resource. Instead, this property can be specified in a Radius Attributes Group resource. For more information, refer to <a href="#">Table 24</a> on page 24 .

**TABLE 38** Resource: DSPK Pools (continued)

Property Name	Type	Editable	Sort/Filter	Optional in Request/Response Body?	Description
isUsePolicies	Boolean (true)	Yes	No	Optional on create only, but not on any subsequent uses.	<p>This is a new property beginning with with releases later than the initial 5.7 release. This property cannot be set using an API to create a new DSPK pool, but a "true" value for this property allows you to convert pre-5.7 DSPK pools to pools where you apply a configured policy. Once you make this change, it cannot be undone and the vlanId, classid, filterid, sessionTimeout, and additionalAttributes properties are all removed from a resource response. From that point going forward, these properties will not be updated in a PUT request and will be ignored in a POST request.</p> <p><b>NOTE</b>            If you created a DSPK pool via an API call in the initial 5.7 release, it is still in the older format without an attached policy. However, if you created a DSPK pool via the UI in the initial 5.7 release, it already will be in the new, policy-applied format.</p> <p><b>NOTE</b>            To complete the conversion of the DSPK pool to the policy-applied pool type, refer to the following steps:</p> <ol style="list-style-type: none"> <li>1. Create one or more RADIUS attributes group to assign to a policy: <a href="#">RADIUS Attribute Groups</a> on page 24</li> <li>2. Create one or more policies: <a href="#">Policies</a> on page 30</li> <li>3. Assign one or more policies to the DSPK pool: <a href="#">Assigned Policies</a> on page 68</li> </ol>
links	Link	No	No	No	<p>Contains the following link as hrefs for use in other API calls:</p> <ul style="list-style-type: none"> <li>• Self referencing link</li> <li>• Policies link</li> <li>• Links to dpsks that belong to this pool</li> </ul>

### DSPK Pool URIs and Actions

The following table indicates the URIs that you can append to the root URI, along with the actions you can take, and possible return codes you can receive.

**TABLE 39** DSPK Pool URIs and Actions

URI	Action	Description	Return Codes
/dpskPools	GET	Returns the list of all eDSPK pools that are in the system.	401 - Unauthorized 200 - OK
	POST	Creates an eDSPK pool.	401 - Unauthorized 201 - Created

**TABLE 39** DPSK Pool URIs and Actions (continued)

URI	Action	Description	Return Codes
/dpskPools/{guid}	GET	Returns the specific eDPSK pool.	404 - Not Found 401 - Unauthorized 200 - OK
	DELETE	Deletes the pool specified and all its child resources, including DPSKs, devices, and associated enrollments.	500 - Internal Server Error (such as "Pool in use") 401 - Unauthorized 204 - No content 200 - OK
	PUT	Updates an eDPSK pool. See the <a href="#">Table 38</a> and <a href="#">Table 25</a> on page 25 for which properties can be edited.	404 - Not Found 401 - Unauthorized 200 - OK

### Example of Using GET for DPSK Pools

This example demonstrates how to obtain information about a DPSK pool that has already been created in the Cloudpath UI.

**URI:**

This example uses the following URI:

```
https://Jeff243.cloudpath.net/admin/apiv2/BmGsez6evQc8/dpskPools
```

where:

- https://Jeff243.cloudpath.net/admin/apiv2 is the root URI of the Cloudpath system being used (must include https, as shown)
- BmGsez6evQc8 is an example of an API key generated from the **Configuration > API Keys** section of the Cloudpath UI

**Request Headers:**

The following table shows the required request headers for this URI example, with an example value of an active token that must be pasted into the Authorization header value:

**TABLE 40** Request Headers

Key	Value
Content-type	application/json
Authorization	eyJhbGciOiJIUzI1NiJ9.eyJzdWIiOiJqZWZmLnJob2RpZUBjb21tc2NvcGUuY29tliwicm9sZVBrIjoiMjEwMDAiLCJhY2NvdW50QWRtaW5QayI6IjIiLCJhcGILZXXkiOiJaV2NjTGpQZUdZMGUuLjE1NzU1NzUxNTcsmV4cCl6MTU3NTU3NTQ1N30.2q4KTyDUevkAAz7mJyp529Be1-ip3EC8P06Xarmz5ao

**Request Body:**

None required.

**Action:**

Use the **GET** action to send the request.

**Response Body:**

## Core Cloudpath APIs

### DSPK Resources and URIs

Once the request is sent, you will receive a "Status: 200 OK" if the GET is successful. The response body provides information about all existing DSPK pools in your Cloudpath system. In this example, DSPK Pool 1 is the only existing pool. The information in the response body will match the configuration of DSPK Pool 1 as specified in the UI. Any values that were not specified in the UI are the default values:

```
{
  "page": {
    "page": 1,
    "pageSize": 1,
    "totalCount": 1
  },
  "contents": [
    {
      "guid": "AccountDpskPool-8c95a636-59ff-4a85-alce-e2b6984f5a50",
      "displayName": "DSPK Pool 1",
      "description": "",
      "enabled": true,
      "phraseDefaultLength": 12,
      "phraseRandomCharactersType": "ALPHABETIC_LOWER",
      "ssidList": [
        "ssid 22"
      ],
      "enforceExpirationDate": false,
      "expirationDateType": "MONTHS_AFTER_TIME",
      "expirationDateValue": "1",
      "enforceDeviceCountLimit": false,
      "deviceCountLimit": 1,
      "supportsPolicies": true,
      "defaultAccess": "ACCEPT",
      "links": [
        {
          "rel": "self",
          "href": "https://jeff243.cloudpath.net/admin/apiv2/BmGsez6evQc8/dpskPools/AccountDpskPool-8c95a636-59ff-4a85-alce-e2b6984f5a50",
          "hreflang": null,
          "media": null,
          "title": null,
          "type": null,
          "deprecation": null
        },
        {
          "rel": "dpsks",
          "href": "https://jeff243.cloudpath.net/admin/apiv2/BmGsez6evQc8/dpskPools/AccountDpskPool-8c95a636-59ff-4a85-alce-e2b6984f5a50/dpsks?page=1&pageSize=10{&filter,orderBy}",
          "hreflang": null,
          "media": null,
          "title": null,
          "type": null,
          "deprecation": null
        },
        {
          "rel": "policy",
          "href": "https://jeff243.cloudpath.net/admin/apiv2/BmGsez6evQc8/dpskPools/AccountDpskPool-8c95a636-59ff-4a85-alce-e2b6984f5a50/policies?page=1&pageSize=100{&filter,orderBy}",
          "hreflang": null,
          "media": null,
          "title": null,
          "type": null,
          "deprecation": null
        }
      ]
    }
  ]
}
```

### Example of Using POST to Create a DSPK Pool

This example demonstrates how to create a new DSPK pool in your Cloudpath system by using the REST API POST call.

#### URI:

This example uses the following URI:

```
https://Jeff243.cloudpath.net/admin/apiv2/BmGsez6evQc8/dpskPools
```

where:

- https://Jeff243.cloudpath.net/admin/apiv2 is the root URI of the Cloudpath system being used (must include https, as shown)
- BmGsez6evQc8 is an example of an API key generated from the **Configuration > API Keys** section of the Cloudpath UI

**Request Headers:**

The following table shows the required request headers for this URI example, with an example value of an active token that must be pasted into the Authorization header value:

**TABLE 41** Request Headers

Key	Value
Content-type	application/json
Authorization	eyJhbGciOiJIUzI1NiJ9.eyJzdWIiOiJqZWZmLnJob2RpZUBjb21tc2NvcGUuY29tliwicm9sZVBrJoiMjEwMDAiLCJhY2NvdW50QWRtaW5QayI6IjIiLCJhcGILZXkiOiJhV2NjTGpQZUdZMGUuIiLCJpYXQiOiE1NzU1NzUxNTcsmV4cCl6MTU3NTU3NTQ1N30.2q4KTyDUevkAAz7mJyp529Be1-ip3EC8P06Xarmz5ao

**Request Body:**

The following is an example of a request body for creating a DPSK pool. You can refer to the preceding Resource tables for a list and descriptions of properties you can use to define your pool. For instance, in this example, a pool called "DPSK Pool 20" is being created with the values provided in the body.

```
{
  "displayName": "DPSK Pool 20",
  "description": "",
  "enabled": true,
  "phraseDefaultLength": 11,
  "phraseRandomCharactersType": "ALPHABETIC_LOWER",
  "ssidList": [
    "SSID19",
    "SSID20"
  ],
  "enforceExpirationDate": false,
  "expirationDateType": "MONTHS_AFTER_TIME",
  "expirationDateValue": "1",
  "enforceDeviceCountLimit": true,
  "deviceCountLimit": 4
}
```

**Action:**

Use the **POST** action to send the request.

**Response Body:**

Once the request is sent, you will receive a "Status: 201 Created" if the POST is successful. You can see that a "guid" (a unique identifier for the newly created pool) is included in the response body.

```
{
  "guid": "AccountDpskPool-14dc1ed8-ba2a-43bd-8cad-e30dc5f20fb8",
  "displayName": "DPSK Pool 20",
  "description": "",
  "enabled": true,
  "phraseDefaultLength": 11,
  "phraseRandomCharactersType": "ALPHABETIC_LOWER",
  "ssidList": [
    "SSID19",
    "SSID20"
  ],
}
```

## Core Cloudpath APIs

### DSPK Resources and URIs

```
"enforceExpirationDate": false,
"expirationDateType": "MONTHS_AFTER_TIME",
"expirationDateValue": "1",
"enforceDeviceCountLimit": true,
"deviceCountLimit": 4,
"supportsPolicies": true,
"defaultAccess": "ACCEPT",    "links": [
  {
    "rel": "self",
    "href": "https://jeff243.cloudpath.net/admin/apiv2/BmGsez6evQc8/dpskPools/
AccountDpskPool-14dc1ed8-ba2a-43bd-8cad-e30dc5f20fb8",
    "hreflang": null,
    "media": null,
    "title": null,
    "type": null,
    "deprecation": null
  },
  {
    "rel": "dpsks",
    "href": "https://jeff243.cloudpath.net/admin/apiv2/BmGsez6evQc8/dpskPools/
AccountDpskPool-14dc1ed8-ba2a-43bd-8cad-e30dc5f20fb8/dpsks?page=1&pageSize=10{&filter,orderBy}",
    "hreflang": null,
    "media": null,
    "title": null,
    "type": null,
    "deprecation": null
  },
  {
    "rel": "policy",
    "href": "https://jeff243.cloudpath.net/admin/apiv2/5XcTc6SjkHDL/dpskPools/
AccountDpskPool-14dc1ed8-ba2a-43bd-8cad-e30dc5f20fb8/policies?page=1&pageSize=100{&filter,orderBy}",
    "hreflang": null,
    "media": null,
    "title": null,
    "type": null,
    "deprecation": null
  }
]
}
```

### Verifying the Newly Created DSPK Pool in the Cloudpath UI:

You can go to the **Configuration > DSPK Pools** area of the UI to confirm that the pool was created correctly.

## DPSKs

You can use REST API v2 calls to obtain information about existing DSPKs, to create or edit DSPKs, and to delete DSPKs.

The following table lists the properties that can be used in the body of a DSPK-related request and/or are provided in the response body. (In the "Optional" column, if a default value is applicable, it is listed in angle brackets (< >).)

**TABLE 42** Resource: DSPKs

Property Name	Type	Editable	Sort/Filter	Optional in Request/ Response Body?	Description
guid	String	No	Neither	Optional on create only, but not on any subsequent uses	The unique identifier for this PSK.
name	String	Yes	sortBy, like	No	The reference name of the item.
thirdPartyId	String	Yes	sortBy, like	No	A string that can be used by third-party consumers. This can be referenced using attribute variables in RADIUS attributes as: DSPK.THIRDPARTY_ID



**TABLE 42** Resource: DPSKs (continued)

Property Name	Type	Editable	Sort/Filter	Optional in Request/Response Body?	Description
passphrase	String	Yes	Neither	Optional on create only, but not on any subsequent uses	The pre-shared key for this PSK, which will be automatically assigned if not provided in a POST. This string will always be returned with the resource.  <b>NOTE</b> This property cannot be edited when devices are associated with the DPSK (deviceCount > 0). If this field is edited while deviceCount > 0, then a "409 Conflict" message will be returned.
status	Enum <String>	Yes	in, eq	No	The status of the PSK. Options are: ACTIVE, EXPIRED, or REVOKED. A change to REVOKED or ACTIVE can be requested but only for a DPSK whose state is not EXPIRED.
ssidList	List <String>	Yes	Neither	No	If not null, this is the list of SSIDs on which the DPSK can be used. This value must be a subset of the SSIDs assigned to the corresponding DPSK pool. If the ssidList property is not specified, the DPSK can be used on any SSID contained in the "ssids" field of the corresponding DPSK pool.  <b>NOTE</b> This field cannot be edited when devices are associated with the DPSK (deviceCount > 0). If this field is edited while deviceCount > 0, then a "409 Conflict" message will be returned.
expirationDateTime	String < DateTime>	Yes	sortBy	Yes	The DPSK (and the devices registered to the DPSK) will no longer be usable after the date and time specified. ISO 8601 formatted date is used for this property.
useExpirationDate	boolean	Yes	Neither	No <true>	Indicates if expiration date time should be used.
useDeviceCountLimit	boolean	Yes	Neither	No <false>	Indicates that the system will enforce the device count limit for this specific DPSK.
deviceCountLimit	Long	Yes	Neither	Yes	If specified, this DPSK will have its own device count limit enforced independently of the corresponding DPSK pool.
deviceCount	Integer	No	Neither	Yes	The number of devices currently associated with the DPSK. This is provided for information only and cannot be changed. If a different number is given in a POST or PUT, the number is ignored.
revokedDateTime	String < DateTime>	No	Neither	Yes	The date time (in ISO 8601 date time format) that the DPSK was revoked.
revocationReason	String	Yes	Neither	Yes	If the status is changed to REVOKED, this is the "reason for the revocation."
vlanId	String	Yes	Neither	No	If specified, this VLAN ID will override the VLAN ID specified within the corresponding DPSK pool.
overrideReauthentication	String	Yes	Neither	Yes	If specified, this Reauthentication value will override the value specified within the DPSK pool.

**TABLE 42** Resource: DPSKs (continued)

Property Name	Type	Editable	Sort/Filter	Optional in Request/Response Body?	Description
link	Link	No	No	No	The following links are included as hrefs for use in other API calls: <ul style="list-style-type: none"> <li>• self-referencing link</li> <li>• link to parent eDPSK pool</li> <li>• enrollment link if applicable. For information about Enrollment APIs, including DPSK enrollments, refer to <a href="#">Enrollments</a> on page 95.</li> </ul>

### DPSK URIs and Actions

The following table indicates the URIs that you can append to the root URI, along with the actions you can take, and possible return codes you can receive.

**TABLE 43** DPSK URIs and Actions

URI	Action	Description	Return Codes
dpskPools /{poolGuid}/dpsks	GET	Returns the list of PSKs that are part of the identified pool.	200 - OK 404 -Not Found
	POST	Creates a PSK in the identified pool.	201- Created 404 - Not Found
/dpskPools/{poolGuid}/dpsks/{guid}	GET	Returns the specified PSK.	200 - OK 404 - Not Found
	DELETE	Deletes the specified PSK.	200 - OK 204 - No content 401-Unauthorized
	PUT	Updates a PSK. See <a href="#">Table 42</a> for which properties can be edited.	200 - OK 401-Unauthorized 404 -Not Found 409 - Conflict

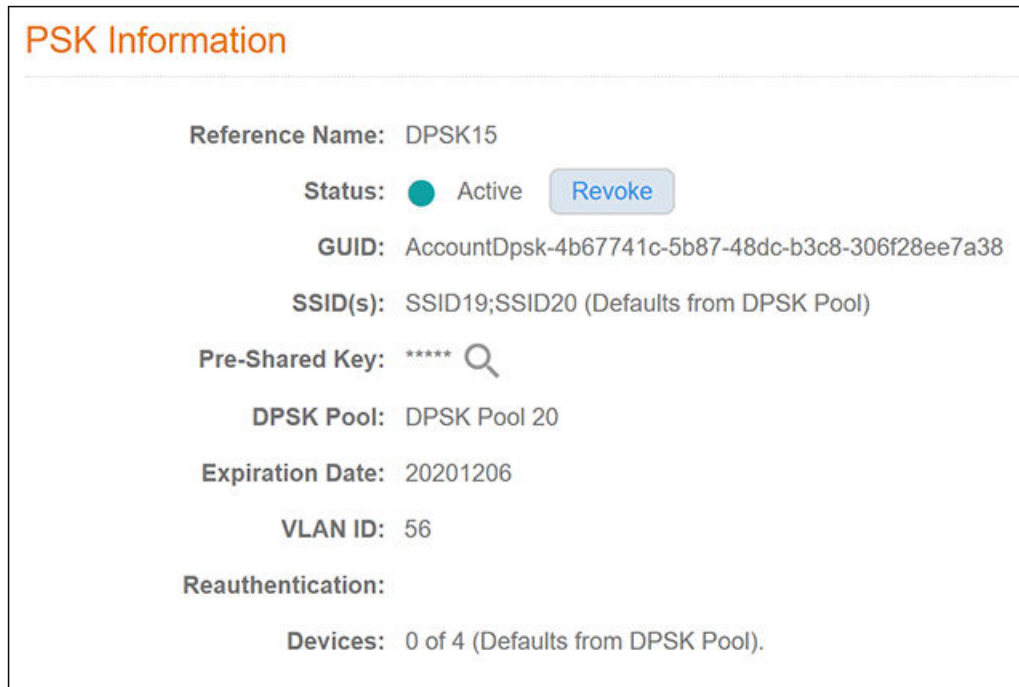
**NOTE**

For DPSK-related enrollment URIs, see [Enrollment URIs and Actions](#) on page 96.

### Example of Using PUT to Edit a DPSK Within an Existing DPSK Pool

This example demonstrates how to edit a DPSK that has already been created either by using the UI or by using a REST API POST call. In [Example of Using POST to Create a DPSK Pool](#) on page 38, an example shows the creation of a pool called DPSK Pool 20. Suppose that a DPSK called DPSK15 was then created within that pool. The following figure shows the properties of DPSK15 from the UI:

FIGURE 2 DPSK15 Information in UI Before API PUT Call



**URI:**

This example uses the following URI:

```
https://Jeff243.cloudpath.net/admin/apiv2/5XcTc6SjkHDL/dpskPools/AccountDpskPool-14dc1ed8-ba2a-43bd-8cad-e30dc5f20fb8/dpsks/AccountDpsk-4b67741c-5b87-48dc-b3c8-306f28ee7a38
```

where:

- https://Jeff243.cloudpath.net/admin/apiv2 is the root URI of the Cloudpath system being used (must include https, as shown)
- 5XcTc6SjkHDL is an example of an API key generated from the **Configuration > API Keys** section of the Cloudpath UI
- AccountDpskPool-14dc1ed8-ba2a-43bd-8cad-e30dc5f20fb8 is the GUID of the DPSK pool to which this DPSK belongs
- AccountDpsk-4b67741c-5b87-48dc-b3c8-306f28ee7a38 is the GUID of this specific DPSK that will be edited (see the figure above for this GUID)

**Request Headers:**

The following table shows the required request headers for this URI example, with an example value of an active token that must be pasted into the Authorization header value:

TABLE 44 Request Headers

Key	Value
Content-type	application/json
Authorization	eyJhbGciOiJIUzI1NiJ9.eyJzdWIiOiJqZWZmLnJob2RpZUBjb21tc2NvcGUuY29tliwicm9sZVBrJjoiMjEwMDAiLCJhY2NvdW50QWRtaW50Qayl6JjIiLCJhcGILZXkiOiJhV2NjTGpQZUdZMGUuLCJpYXQiOiJlNzU1NzUxNTcsmV4cCl6MTU3NTU3NTQ1N30.2q4KTyDUevkAAz7mJyp529Be1-ip3EC8P06Xarmz5ao

**Request Body:**

The following is an example of a request body for editing the DSPK called DSPK.

**NOTE**

To create the body of a PUT request, you can start by first doing a GET request on the DSPK that you want to edit. After a successful GET request, copy and paste the entire response body into the request body of your PUT. Then, edit the values you want to change. In the example shown below, the ssidList has been changed to null, and the vlanID has been changed to 44.

```
{
  "guid": "AccountDpsk-4b67741c-5b87-48dc-b3c8-306f28ee7a38",
  "name": "DSPK15",
  "passphrase": "cemqwzmzgit",
  "status": "ACTIVE",
  "ssidList": [],
  "expirationDateTime": "2020-12-06T00:00-07:00[America/Denver]",
  "useDeviceCountLimit": false,
  "deviceCountLimit": 0,
  "vlanid": "44"
}
```

**Action:**

Use the **PUT** action to send the request.

**Response Body:**

Once the request is sent, you will receive a "Status: 200 OK" if the PUT is successful. You can see that the response body below matches what was requested in the request body above. The response body also includes the href links that are listed in [Table 42](#).

```
{
  "guid": "AccountDpsk-4b67741c-5b87-48dc-b3c8-306f28ee7a38",
  "name": "DSPK15",
  "passphrase": "cemqwzmzgit",
  "status": "ACTIVE",
  "ssidList": [],
  "expirationDateTime": "2020-12-06T07:00:00Z",
  "useDeviceCountLimit": false,
  "deviceCountLimit": 0,
  "deviceCount": 0,
  "vlanid": "44",
  "links": [
    {
      "rel": "self",
      "href": "https://jeff243.cloudpath.net/admin/apiv2/5XcTc6SjkHDL/dpskPools/AccountDpskPool-14dc1ed8-ba2a-43bd-8cad-e30dc5f20fb8/dpsks/AccountDpsk-4b67741c-5b87-48dc-b3c8-306f28ee7a38",
      "hreflang": null,
      "media": null,
      "title": null,
      "type": null,
      "deprecation": null
    },
    {
      "rel": "parent",
      "href": "https://jeff243.cloudpath.net/admin/apiv2/5XcTc6SjkHDL/dpskPools/AccountDpskPool-14dc1ed8-ba2a-43bd-8cad-e30dc5f20fb8",
      "hreflang": null,
      "media": null,
      "title": null,
      "type": null,
      "deprecation": null
    },
    {
      "rel": "devices",
      "href": "https://jeff243.cloudpath.net/admin/apiv2/5XcTc6SjkHDL/dpskPools/AccountDpskPool-14dc1ed8-ba2a-43bd-8cad-e30dc5f20fb8/dpsks/AccountDpsk-4b67741c-5b87-48dc-b3c8-306f28ee7a38/devices?page=1&pageSize=10{&filter,orderBy}",
      "hreflang": null,

```

```

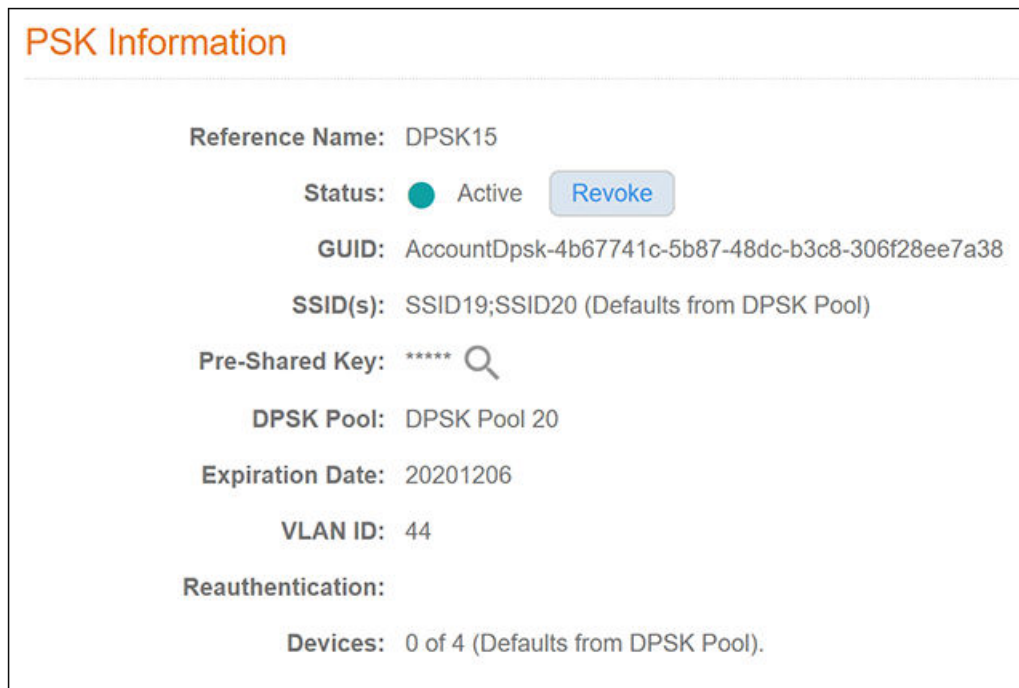
    "media": null,
    "title": null,
    "type": null,
    "deprecation": null
  }
]
}

```

### Verifying the Edited DPSK in the Cloudpath UI:

You can go to the UI to confirm that the DPSK was edited correctly. The values should match those in the Response body from the PUT. For example, you can see that the SSID list no longer has any restrictions, and that the VLAN ID has been changed to 44.

**FIGURE 3** DPSK15 Information in UI After API PUT Call



### Example of Using GET to Obtain Listings of Multiple DPSKs Within an Existing DPSK Pool

This example demonstrates how to use a GET call to obtain a full list of DPSKs.

#### URI:

This example uses the following URI:

```

https://Jeff243.cloudpath.net/admin/apiv2/5XcTc6SjkHDL/dpskPools/AccountDpskPool-14dc1ed8-ba2a-43bd-8cad-e30dc5f20fb8/dpsks

```

where:

- <https://Jeff243.cloudpath.net/admin/apiv2> is the root URI of the Cloudpath system being used (must include https, as shown)
- 5XcTc6SjkHDL is an example of an API key generated from the **Configuration > API Keys** section of the Cloudpath UI
- AccountDpskPool-14dc1ed8-ba2a-43bd-8cad-e30dc5f20fb8 is the GUID of the DPSK pool from which you want a listing of all its DPSKs and their respective properties.

#### Request Headers:

The following table shows the required request headers for this URI example, with an example value of an active token that must be pasted into the Authorization header value:

**TABLE 45** Request Headers

Key	Value
Content-type	application/json
Authorization	eyJhbGciOiJIUzI1NiJ9.eyJzdWiiOiJqZWZmLnJob2RpZUBjb21tc2NvcGUuY29tliwicm9sZVBrIjoieWMDAiLCJhY2NvdW50QWRtaW5QayI6IjIiLCJhcGILZXkiOiJhV2NjTjGpQZUdZMGUilCjYXQiOjE1NzU1NzUxNTcslmV4cCI6MTU3NTU3NTQ1N30.2q4KTyDUevkAAz7mJyp529Be1-ip3EC8P06Xarmz5ao

**Request Body:**

No request body is needed for this request. All the necessary information is in the URI.

**Action:**

Use the **GET** action to send the request.

**Response Body:**

Once the request is sent, you will receive a "Status: 200 OK" if the GET is successful. The response body below lists information for each of the six DSPKs within the corresponding pool. The first part of the output shows the page information: All the information is on page 1, the page size is currently 6 (meaning there are six items on page 1), and the total number of DSPKs listed is 6.

```
{
  "page": {
    "page": 1,
    "pageSize": 6,
    "totalCount": 6
  },
  "contents": [
    {
      "guid": "AccountDpsk-e45f6b14-2cff-4c8d-b44e-102fd67fe02c",
      "name": "DPSK23",
      "passphrase": "xzghjmjzdao",
      "status": "ACTIVE",
      "ssidList": [],
      "expirationDateTime": "2020-07-27T06:00:00Z",
      "useDeviceCountLimit": false,
      "deviceCountLimit": 0,
      "deviceCount": 0,
      "links": [
        {
          "rel": "self",
          "href": "https://jeff243.cloudpath.net/admin/apiv2/5XcTc6SjkHDL/dpskPools/AccountDpskPool-14dc1ed8-ba2a-43bd-8cad-e30dc5f20fb8/dpsks/AccountDpsk-e45f6b14-2cff-4c8d-b44e-102fd67fe02c",
          "hreflang": null,
          "media": null,
          "title": null,
          "type": null,
          "deprecation": null
        },
        {
          "rel": "parent",
          "href": "https://jeff243.cloudpath.net/admin/apiv2/5XcTc6SjkHDL/dpskPools/AccountDpskPool-14dc1ed8-ba2a-43bd-8cad-e30dc5f20fb8",
          "hreflang": null,
          "media": null,
          "title": null,
          "type": null,
          "deprecation": null
        }
      ],
      {
        "rel": "devices",
        "href": "https://jeff243.cloudpath.net/admin/apiv2/5XcTc6SjkHDL/dpskPools/"
      }
    }
  ]
}
```

```

AccountDpskPool-14dc1ed8-ba2a-43bd-8cad-e30dc5f20fb8/dpsks/AccountDpsk-e45f6b14-2cff-4c8d-b44e-102fd67fe02c/
devices?page=1&pageSize=10{&filter,orderBy}",
    "hreflang": null,
    "media": null,
    "title": null,
    "type": null,
    "deprecation": null
  }
},
{
  "guid": "AccountDpsk-bc993a37-05f4-4a39-8fe3-6a888b35f2c1",
  "name": "DPSK30",
  "passphrase": "uoosztyuoel",
  "status": "ACTIVE",
  "ssidList": [],
  "expirationDateTime": "2020-07-27T06:00:00Z",
  "useDeviceCountLimit": false,
  "deviceCountLimit": 0,
  "deviceCount": 0,
  "links": [
    {
      "rel": "self",
      "href": "https://jeff243.cloudpath.net/admin/apiv2/5XcTc6SjkHDL/dpskPools/
AccountDpskPool-14dc1ed8-ba2a-43bd-8cad-e30dc5f20fb8/dpsks/AccountDpsk-
bc993a37-05f4-4a39-8fe3-6a888b35f2c1",
      "hreflang": null,
      "media": null,
      "title": null,
      "type": null,
      "deprecation": null
    },
    {
      "rel": "parent",
      "href": "https://jeff243.cloudpath.net/admin/apiv2/5XcTc6SjkHDL/dpskPools/
AccountDpskPool-14dc1ed8-ba2a-43bd-8cad-e30dc5f20fb8",
      "hreflang": null,
      "media": null,
      "title": null,
      "type": null,
      "deprecation": null
    },
    {
      "rel": "devices",
      "href": "https://jeff243.cloudpath.net/admin/apiv2/5XcTc6SjkHDL/dpskPools/
AccountDpskPool-14dc1ed8-ba2a-43bd-8cad-e30dc5f20fb8/dpsks/AccountDpsk-bc993a37-05f4-4a39-8fe3-6a888b35f2c1/
devices?page=1&pageSize=10{&filter,orderBy}",
      "hreflang": null,
      "media": null,
      "title": null,
      "type": null,
      "deprecation": null
    }
  ]
},
{
  "guid": "AccountDpsk-5ed29464-d571-48be-a0d0-7574ab87b93d",
  "name": "DPSK31",
  "passphrase": "jekgqviayiv",
  "status": "ACTIVE",
  "ssidList": [],
  "expirationDateTime": "2020-07-27T06:00:00Z",
  "useDeviceCountLimit": false,
  "deviceCountLimit": 0,
  "deviceCount": 0,
  "links": [
    {
      "rel": "self",
      "href": "https://jeff243.cloudpath.net/admin/apiv2/5XcTc6SjkHDL/dpskPools/
AccountDpskPool-14dc1ed8-ba2a-43bd-8cad-e30dc5f20fb8/dpsks/AccountDpsk-5ed29464-d571-48be-
a0d0-7574ab87b93d",
      "hreflang": null,

```

## Core Cloudpath APIs

### DSPK Resources and URIs

```
        "media": null,
        "title": null,
        "type": null,
        "deprecation": null
    },
    {
        "rel": "parent",
        "href": "https://jeff243.cloudpath.net/admin/apiv2/5XcTc6SjkHDL/dpskPools/AccountDpskPool-14dc1ed8-ba2a-43bd-8cad-e30dc5f20fb8",
        "hreflang": null,
        "media": null,
        "title": null,
        "type": null,
        "deprecation": null
    },
    {
        "rel": "devices",
        "href": "https://jeff243.cloudpath.net/admin/apiv2/5XcTc6SjkHDL/dpskPools/AccountDpskPool-14dc1ed8-ba2a-43bd-8cad-e30dc5f20fb8/dpsks/AccountDpsk-5ed29464-d571-48be-a0d0-7574ab87b93d/devices?page=1&pageSize=10{&filter,orderBy}",
        "hreflang": null,
        "media": null,
        "title": null,
        "type": null,
        "deprecation": null
    }
]
},
{
    "guid": "AccountDpsk-e7e2fe17-912d-4826-8010-05f3263f8fe8",
    "name": "DPSK32",
    "passphrase": "wilfyhhumqc",
    "status": "ACTIVE",
    "ssidList": [],
    "expirationDateTime": "2020-07-27T06:00:00Z",
    "useDeviceCountLimit": false,
    "deviceCountLimit": 0,
    "deviceCount": 0,
    "links": [
        {
            "rel": "self",
            "href": "https://jeff243.cloudpath.net/admin/apiv2/5XcTc6SjkHDL/dpskPools/AccountDpskPool-14dc1ed8-ba2a-43bd-8cad-e30dc5f20fb8/dpsks/AccountDpsk-e7e2fe17-912d-4826-8010-05f3263f8fe8",
            "hreflang": null,
            "media": null,
            "title": null,
            "type": null,
            "deprecation": null
        },
        {
            "rel": "parent",
            "href": "https://jeff243.cloudpath.net/admin/apiv2/5XcTc6SjkHDL/dpskPools/AccountDpskPool-14dc1ed8-ba2a-43bd-8cad-e30dc5f20fb8",
            "hreflang": null,
            "media": null,
            "title": null,
            "type": null,
            "deprecation": null
        },
        {
            "rel": "devices",
            "href": "https://jeff243.cloudpath.net/admin/apiv2/5XcTc6SjkHDL/dpskPools/AccountDpskPool-14dc1ed8-ba2a-43bd-8cad-e30dc5f20fb8/dpsks/AccountDpsk-e7e2fe17-912d-4826-8010-05f3263f8fe8/devices?page=1&pageSize=10{&filter,orderBy}",
            "hreflang": null,
            "media": null,
            "title": null,
            "type": null,
            "deprecation": null
        }
    ]
}
```



```

    },
    {
      "guid": "AccountDpsk-fce6d0e6-19a1-464c-850c-31bde9472c52",
      "name": "DPSK33",
      "passphrase": "zygrjkezfry",
      "status": "ACTIVE",
      "ssidList": [],
      "expirationDateTime": "2020-07-27T06:00:00Z",
      "useDeviceCountLimit": false,
      "deviceCountLimit": 0,
      "deviceCount": 0,
      "links": [
        {
          "rel": "self",
          "href": "https://jeff243.cloudpath.net/admin/apiv2/5XcTc6SjkHDL/dpskPools/AccountDpskPool-14dc1ed8-ba2a-43bd-8cad-e30dc5f20fb8/dpsks/AccountDpsk-fce6d0e6-19a1-464c-850c-31bde9472c52",
          "hreflang": null,
          "media": null,
          "title": null,
          "type": null,
          "deprecation": null
        },
        {
          "rel": "parent",
          "href": "https://jeff243.cloudpath.net/admin/apiv2/5XcTc6SjkHDL/dpskPools/AccountDpskPool-14dc1ed8-ba2a-43bd-8cad-e30dc5f20fb8",
          "hreflang": null,
          "media": null,
          "title": null,
          "type": null,
          "deprecation": null
        }
      ],
      {
        "rel": "devices",
        "href": "https://jeff243.cloudpath.net/admin/apiv2/5XcTc6SjkHDL/dpskPools/AccountDpskPool-14dc1ed8-ba2a-43bd-8cad-e30dc5f20fb8/dpsks/AccountDpsk-fce6d0e6-19a1-464c-850c-31bde9472c52/devices?page=1&pageSize=10{&filter,orderBy}",
        "hreflang": null,
        "media": null,
        "title": null,
        "type": null,
        "deprecation": null
      }
    ]
  },
  {
    "guid": "AccountDpsk-4b67741c-5b87-48dc-b3c8-306f28ee7a38",
    "name": "DPSK15",
    "passphrase": "cemqwzmzgit",
    "status": "ACTIVE",
    "ssidList": [],
    "expirationDateTime": "2020-12-06T07:00:00Z",
    "useDeviceCountLimit": false,
    "deviceCountLimit": 0,
    "deviceCount": 0,
    "vlanid": "44",
    "links": [
      {
        "rel": "self",
        "href": "https://jeff243.cloudpath.net/admin/apiv2/5XcTc6SjkHDL/dpskPools/AccountDpskPool-14dc1ed8-ba2a-43bd-8cad-e30dc5f20fb8/dpsks/AccountDpsk-4b67741c-5b87-48dc-b3c8-306f28ee7a38",
        "hreflang": null,
        "media": null,
        "title": null,
        "type": null,
        "deprecation": null
      },
      {
        "rel": "parent",
        "href": "https://jeff243.cloudpath.net/admin/apiv2/5XcTc6SjkHDL/dpskPools/

```

## Core Cloudpath APIs

### DSPK Resources and URIs

```
AccountDpskPool-14dc1ed8-ba2a-43bd-8cad-e30dc5f20fb8",
    "hreflang": null,
    "media": null,
    "title": null,
    "type": null,
    "deprecation": null
  },
  {
    "rel": "devices",
    "href": "https://jeff243.cloudpath.net/admin/apiv2/5XcTc6SjkHDL/dpskPools/AccountDpskPool-14dc1ed8-ba2a-43bd-8cad-e30dc5f20fb8/dpsks/AccountDpsk-4b67741c-5b87-48dc-b3c8-306f28ee7a38/devices?page=1&pageSize=10{&filter,orderBy}",
    "hreflang": null,
    "media": null,
    "title": null,
    "type": null,
    "deprecation": null
  }
]
}
]
```

### Example of Creating a DSPK In an Existing DSPK Pool By Using a POST call

This example shows how to use a POST to create a new DSPK in an existing pool.

#### URI:

This example uses the following URI:

```
https://Jeff243.cloudpath.net/admin/apiv2/5XcTc6SjkHDL/dpskPools/AccountDpskPool-14dc1ed8-ba2a-43bd-8cad-e30dc5f20fb8/dpsks
```

where:

- <https://Jeff243.cloudpath.net/admin/apiv2> is the root URI of the Cloudpath system being used (must include https, as shown)
- 5XcTc6SjkHDL is an example of an API key generated from the **Configuration > API Keys** section of the Cloudpath UI
- AccountDpskPool-14dc1ed8-ba2a-43bd-8cad-e30dc5f20fb8 is the GUID of the pool to which you are adding the new DSPK

#### Request Headers:

The following table shows the required request headers for this URI example, with an example value of an active token that must be pasted into the Authorization header value:

**TABLE 46** Request Headers

Key	Value
Content-type	application/json
Authorization	eyJhbGciOiJIUzI1NiIsInR5cGU6IiwiZWZmLnJob2RpZUBjb21tc2NvcGUuY29tliwicm9sZVBrIjoieWMDAilCjY2NvdW50QRtaW5Qayl6IjEiLCJhcGILZXRkiOiJvV2NjTGpQZUdZMGUilCjYXQXQjE1NzU1NzUxNTcslmV4cCl6MTU3NTU3NTQ1N30.2q4KTyDUevkAAz7mJyp529Be1-ip3EC8P06Xarmz5ao

#### Request Body:

The following is an example of a request body for creating a DSPK. You can refer to the preceding Resource tables for a list and descriptions of properties you can use to define your pool. For instance, in this example, a DSPK called "dpsk51" is being created with the values provided in the body.

```
{
  "name": "dpsk51",
  "passphrase": "qsrmlDiecca",
  "status": "ACTIVE",
```

```

    "ssidList": [],
    "expirationDateTime": "2019-12-21T00:00-07:00[America/Denver]",
    "useDeviceCountLimit": true,
    "deviceCountLimit": 7,
    "vlanid": "2",
    "overrideReauthentication": 86400
  }
}

```

**Action:**

Use the **POST** action to send the request.

**Response Body:**

Once the request is sent, you will receive a "Status: 201 Created" if the POST is successful. You can see that a "guid" (a unique identifier for the newly created DSPK) is included in the response body.

```

{
  "guid": "AccountDpsk-0d37afce-84c5-4d42-9fc8-43c4f1d19b65",
  "name": "dpsk51",
  "passphrase": "qsrmlxldiecca",
  "status": "ACTIVE",
  "ssidList": [],
  "expirationDateTime": "2020-12-21T07:00:00Z",
  "useDeviceCountLimit": true,
  "deviceCountLimit": 7,
  "deviceCount": 0,
  "vlanid": "2",
  "overrideReauthentication": 86400,
  "links": [
    {
      "rel": "self",
      "href": "https://jeff243.cloudpath.net/admin/apiv2/5XcTc6SjkHDL/dpskPools/AccountDpskPool-14dc1ed8-ba2a-43bd-8cad-e30dc5f20fb8/dpsks/AccountDpsk-0d37afce-84c5-4d42-9fc8-43c4f1d19b65",
      "hreflang": null,
      "media": null,
      "title": null,
      "type": null,
      "deprecation": null
    },
    {
      "rel": "parent",
      "href": "https://jeff243.cloudpath.net/admin/apiv2/5XcTc6SjkHDL/dpskPools/AccountDpskPool-14dc1ed8-ba2a-43bd-8cad-e30dc5f20fb8",
      "hreflang": null,
      "media": null,
      "title": null,
      "type": null,
      "deprecation": null
    },
    {
      "rel": "devices",
      "href": "https://jeff243.cloudpath.net/admin/apiv2/5XcTc6SjkHDL/dpskPools/AccountDpskPool-14dc1ed8-ba2a-43bd-8cad-e30dc5f20fb8/dpsks/AccountDpsk-0d37afce-84c5-4d42-9fc8-43c4f1d19b65/devices?page=1&pageSize=10{&filter,orderBy}",
      "hreflang": null,
      "media": null,
      "title": null,
      "type": null,
      "deprecation": null
    }
  ]
}

```

You can go to the UI to confirm that the DSPK was created correctly.

### Example of Changing Page Properties in a GET Call

This example demonstrates how to change the page properties to display the response body of a GET call (where you are getting a complete list of items) as you choose. In the previous GET example, six DSPKs were listed on one page. The page information was displayed as the following:

```
"page": {  
  "page": 1,  
  "pageSize": 6,  
  "totalCount": 6
```

#### URI:

This example uses the following URI:

```
https://Jeff243.cloudpath.net/admin/apiv2/5XcTc6SjkHDL/dpskPools/AccountDpskPool-14dc1ed8-ba2a-43bd-8cad-e30dc5f20fb8/dpsks/?pageSize=3&page=2
```

where:

- <https://Jeff243.cloudpath.net/admin/apiv2> is the root URI of the Cloudpath system being used (must include https, as shown)
- 5XcTc6SjkHDL is an example of an API key generated from the **Configuration > API Keys** section of the Cloudpath UI
- AccountDpskPool-14dc1ed8-ba2a-43bd-8cad-e30dc5f20fb8 is the GUID of the DSPK pool from which you got a listing of all its DSPKs and their respective properties.
- ?pageSize=3&page=2 denotes that you want three items per page in the GET response body, and you want only the page-2 information.

#### Request Headers:

The following table shows the required request headers for this URI example, with an example value of an active token that must be pasted into the Authorization header value:

**TABLE 47** Request Headers

Key	Value
Content-type	application/json
Authorization	eyJhbGciOiJIUzI1NiJ9.eyJzdWIiOiJqZWZmLnJob2RpZUBjb21tc2NvcGUuY29tliwicm9sZVBrIjoimjEwMDAiLCJhY2NvdW50QWRtaW5QayI6IjIiLCJhcGILZXkiOiJhV2NjTGpZUdZMGMUilCjYXQiOiJlNzU1NzUxNTcslmV4cCl6MTU3NTU3NTQ1N30.2q4KTyDUevkAAz7mJyp529Be1-ip3EC8P06Xarmz5ao

#### Request Body:

No request body is needed

#### Action:

Use the **GET** action to send the request.

#### Response Body:

Once the request is sent, you will receive a "Status: 200 OK" if the GET is successful. The response body below lists the information based on how you used the page filters. As shown below, the page information reflects how it was specified in the URI, and the three Page 2 DSPKs are listed:

#### NOTE

One DSPK has been added to the pool since the original six DSPKs were shown earlier; this is reflected in the total count below showing as 7.

```
{  
  "page": {  
    "page": 2,  
    "pageSize": 3,  
    "totalCount": 7  
  },  
  "contents": [  
    {  
      "id": "AccountDpskPool-14dc1ed8-ba2a-43bd-8cad-e30dc5f20fb8",  
      "name": "AccountDpskPool-14dc1ed8-ba2a-43bd-8cad-e30dc5f20fb8",  
      "description": "AccountDpskPool-14dc1ed8-ba2a-43bd-8cad-e30dc5f20fb8",  
      "type": "AccountDpskPool",  
      "status": "Active",  
      "created": "2018-01-01T00:00:00Z",  
      "updated": "2018-01-01T00:00:00Z",  
      "deleted": "2018-01-01T00:00:00Z",  
      "parent": "AccountDpskPool-14dc1ed8-ba2a-43bd-8cad-e30dc5f20fb8",  
      "children": []  
    }  
  ]  
}
```

```

{
  "guid": "AccountDpsk-5ed29464-d571-48be-a0d0-7574ab87b93d",
  "name": "DPSK31",
  "passphrase": "jekgqviayiv",
  "status": "ACTIVE",
  "ssidList": [],
  "expirationDateTime": "2020-07-27T06:00:00Z",
  "useDeviceCountLimit": false,
  "deviceCountLimit": 0,
  "deviceCount": 0,
  "links": [
    {
      "rel": "self",
      "href": "https://jeff243.cloudpath.net/admin/apiv2/5XcTc6SjkHDL/dpskPools/AccountDpskPool-14dc1ed8-ba2a-43bd-8cad-e30dc5f20fb8/dpsks/AccountDpsk-5ed29464-d571-48be-a0d0-7574ab87b93d",
      "hreflang": null,
      "media": null,
      "title": null,
      "type": null,
      "deprecation": null
    },
    {
      "rel": "parent",
      "href": "https://jeff243.cloudpath.net/admin/apiv2/5XcTc6SjkHDL/dpskPools/AccountDpskPool-14dc1ed8-ba2a-43bd-8cad-e30dc5f20fb8",
      "hreflang": null,
      "media": null,
      "title": null,
      "type": null,
      "deprecation": null
    },
    {
      "rel": "devices",
      "href": "https://jeff243.cloudpath.net/admin/apiv2/5XcTc6SjkHDL/dpskPools/AccountDpskPool-14dc1ed8-ba2a-43bd-8cad-e30dc5f20fb8/dpsks/AccountDpsk-5ed29464-d571-48be-a0d0-7574ab87b93d/devices?page=1&pageSize=10{&filter,orderBy}",
      "hreflang": null,
      "media": null,
      "title": null,
      "type": null,
      "deprecation": null
    }
  ]
},
{
  "guid": "AccountDpsk-e7e2fe17-912d-4826-8010-05f3263f8fe8",
  "name": "DPSK32",
  "passphrase": "wilfyhhumqc",
  "status": "ACTIVE",
  "ssidList": [],
  "expirationDateTime": "2020-07-27T06:00:00Z",
  "useDeviceCountLimit": false,
  "deviceCountLimit": 0,
  "deviceCount": 0,
  "links": [
    {
      "rel": "self",
      "href": "https://jeff243.cloudpath.net/admin/apiv2/5XcTc6SjkHDL/dpskPools/AccountDpskPool-14dc1ed8-ba2a-43bd-8cad-e30dc5f20fb8/dpsks/AccountDpsk-e7e2fe17-912d-4826-8010-05f3263f8fe8",
      "hreflang": null,
      "media": null,
      "title": null,
      "type": null,
      "deprecation": null
    },
    {
      "rel": "parent",
      "href": "https://jeff243.cloudpath.net/admin/apiv2/5XcTc6SjkHDL/dpskPools/AccountDpskPool-14dc1ed8-ba2a-43bd-8cad-e30dc5f20fb8",
      "hreflang": null,

```

## Core Cloudpath APIs

### DSPK Resources and URIs

```
        "media": null,
        "title": null,
        "type": null,
        "deprecation": null
    },
    {
        "rel": "devices",
        "href": "https://jeff243.cloudpath.net/admin/apiv2/5XcTc6SjkHDL/dpskPools/AccountDpskPool-14dc1ed8-ba2a-43bd-8cad-e30dc5f20fb8/dpsks/AccountDpsk-e7e2fe17-912d-4826-8010-05f3263f8fe8/devices?page=1&pageSize=10{&filter,orderBy}",
        "hreflang": null,
        "media": null,
        "title": null,
        "type": null,
        "deprecation": null
    }
]
},
{
    "guid": "AccountDpsk-fce6d0e6-19a1-464c-850c-31bde9472c52",
    "name": "DPSK33",
    "passphrase": "zygrjkezfry",
    "status": "ACTIVE",
    "ssidList": [],
    "expirationDateTime": "2020-07-27T06:00:00Z",
    "useDeviceCountLimit": false,
    "deviceCountLimit": 0,
    "deviceCount": 0,
    "links": [
        {
            "rel": "self",
            "href": "https://jeff243.cloudpath.net/admin/apiv2/5XcTc6SjkHDL/dpskPools/AccountDpskPool-14dc1ed8-ba2a-43bd-8cad-e30dc5f20fb8/dpsks/AccountDpsk-fce6d0e6-19a1-464c-850c-31bde9472c52",
            "hreflang": null,
            "media": null,
            "title": null,
            "type": null,
            "deprecation": null
        },
        {
            "rel": "parent",
            "href": "https://jeff243.cloudpath.net/admin/apiv2/5XcTc6SjkHDL/dpskPools/AccountDpskPool-14dc1ed8-ba2a-43bd-8cad-e30dc5f20fb8",
            "hreflang": null,
            "media": null,
            "title": null,
            "type": null,
            "deprecation": null
        },
        {
            "rel": "devices",
            "href": "https://jeff243.cloudpath.net/admin/apiv2/5XcTc6SjkHDL/dpskPools/AccountDpskPool-14dc1ed8-ba2a-43bd-8cad-e30dc5f20fb8/dpsks/AccountDpsk-fce6d0e6-19a1-464c-850c-31bde9472c52/devices?page=1&pageSize=10{&filter,orderBy}",
            "hreflang": null,
            "media": null,
            "title": null,
            "type": null,
            "deprecation": null
        }
    ]
}
]
```

### Example of Filtering a GET Call

This example demonstrates how to filter a GET call by using a filter parameter. For a list of properties that support filters, and the filter operators that can be used on these properties, refer to [Table 42](#). Suppose you want to use "like" with the value of "3" to filter on only the DSPSKs that have a "3" as part of their *name* property. You would add the following string to the URI: `?filter=name(like:3)`

**URI:**

This example uses the following URI:

```
https://Jeff243.cloudpath.net/admin/apiv2/5XcTc6SjkHDL/dpskPools/AccountDpskPool-14dc1ed8-ba2a-43bd-8cad-e30dc5f20fb8/dpsks/?filter=name(like:3)
```

where:

- `https://Jeff243.cloudpath.net/admin/apiv2` is the root URI of the Cloudpath system being used (must include `https`, as shown)
- `5XcTc6SjkHDL` is an example of an API key generated from the **Configuration > API Keys** section of the Cloudpath UI
- `AccountDpskPool-14dc1ed8-ba2a-43bd-8cad-e30dc5f20fb8` is the GUID of the DSPSK pool from which you want a listing of the DSPSKs that match the filter criteria that you append to the URI.
- `?filter=name(like:3)` is the filter criteria that denotes that you want to display only those DSPSKs that contain the numeral "3" in their name.

**Request Headers:**

The following table shows the required request headers for this URI example, with an example value of an active token that must be pasted into the Authorization header value:

**TABLE 48** Request Headers

Key	Value
Content-type	application/json
Authorization	eyJhbGciOiJIUzI1NiJ9.eyJzdWIiOiJqZWZmLnJob2RpZUBjb21tc2NvcGUuY29tIiwicm9sZVBrIjoieWMDAiLCJhY2NvdW50QWRtaW5QayI6IjIiLCJhcGILZXkiOiJaV2NjTGpQZUdZMGUuIiJpYXQiOiJlNzU1NzUxNTcsmV4cCl6MTU3NTU3NTQ1N30.2q4KTyDUevkAAz7mJyp529Be1-ip3EC8P06Xarmz5ao

**Request Body:**

No request body is needed

**Action:**

Use the **GET** action to send the request.

**Response Body:**

Once the request is sent, you will receive a "Status: 200 OK" if the GET is successful. The response body below lists the information based on how you used the filters. As shown below, all the DSPSKs listed contain the numeral "3" in their name:

```
{
  "page": {
    "page": 1,
    "pageSize": 5,
    "totalCount": 5
  },
  "contents": [
    {
      "guid": "AccountDpsk-e45f6b14-2cff-4c8d-b44e-102fd67fe02c",
      "name": "DPSK23",
      "passphrase": "xzhjmjzdao",
      "status": "ACTIVE",
      "ssidList": [],
      "expirationDateTime": "2020-07-27T06:00:00Z",
    }
  ]
}
```

## Core Cloudpath APIs

### DSPK Resources and URIs

```
    "useDeviceCountLimit": false,
    "deviceCountLimit": 0,
    "deviceCount": 0,
    "links": [
      {
        "rel": "self",
        "href": "https://jeff243.cloudpath.net/admin/apiv2/5XcTc6SjkHDL/dpskPools/AccountDpskPool-14dc1ed8-ba2a-43bd-8cad-e30dc5f20fb8/dpsks/AccountDpsk-e45f6b14-2cff-4c8d-b44e-102fd67fe02c",
        "hreflang": null,
        "media": null,
        "title": null,
        "type": null,
        "deprecation": null
      },
      {
        "rel": "parent",
        "href": "https://jeff243.cloudpath.net/admin/apiv2/5XcTc6SjkHDL/dpskPools/AccountDpskPool-14dc1ed8-ba2a-43bd-8cad-e30dc5f20fb8",
        "hreflang": null,
        "media": null,
        "title": null,
        "type": null,
        "deprecation": null
      },
      {
        "rel": "devices",
        "href": "https://jeff243.cloudpath.net/admin/apiv2/5XcTc6SjkHDL/dpskPools/AccountDpskPool-14dc1ed8-ba2a-43bd-8cad-e30dc5f20fb8/dpsks/AccountDpsk-e45f6b14-2cff-4c8d-b44e-102fd67fe02c/devices?page=1&pageSize=10{&filter,orderBy}",
        "hreflang": null,
        "media": null,
        "title": null,
        "type": null,
        "deprecation": null
      }
    ]
  },
  {
    "guid": "AccountDpsk-bc993a37-05f4-4a39-8fe3-6a888b35f2c1",
    "name": "DPSK30",
    "passphrase": "uoooszttyuoel",
    "status": "ACTIVE",
    "ssidList": [],
    "expirationDateTime": "2020-07-27T06:00:00Z",
    "useDeviceCountLimit": false,
    "deviceCountLimit": 0,
    "deviceCount": 0,
    "links": [
      {
        "rel": "self",
        "href": "https://jeff243.cloudpath.net/admin/apiv2/5XcTc6SjkHDL/dpskPools/AccountDpskPool-14dc1ed8-ba2a-43bd-8cad-e30dc5f20fb8/dpsks/AccountDpsk-bc993a37-05f4-4a39-8fe3-6a888b35f2c1",
        "hreflang": null,
        "media": null,
        "title": null,
        "type": null,
        "deprecation": null
      },
      {
        "rel": "parent",
        "href": "https://jeff243.cloudpath.net/admin/apiv2/5XcTc6SjkHDL/dpskPools/AccountDpskPool-14dc1ed8-ba2a-43bd-8cad-e30dc5f20fb8",
        "hreflang": null,
        "media": null,
        "title": null,
        "type": null,
        "deprecation": null
      },
      {
        "rel": "devices",
```



```

    "href": "https://jeff243.cloudpath.net/admin/apiv2/5XcTc6SjkHDL/dpskPools/AccountDpskPool-14dc1ed8-ba2a-43bd-8cad-e30dc5f20fb8/dpsks/AccountDpsk-bc993a37-05f4-4a39-8fe3-6a888b35f2c1/devices?page=1&pageSize=10{&filter,orderBy}",
    "hreflang": null,
    "media": null,
    "title": null,
    "type": null,
    "deprecation": null
  }
},
{
  "guid": "AccountDpsk-5ed29464-d571-48be-a0d0-7574ab87b93d",
  "name": "DPSK31",
  "passphrase": "jekgqvaiyiv",
  "status": "ACTIVE",
  "ssidList": [],
  "expirationDateTime": "2020-07-27T06:00:00Z",
  "useDeviceCountLimit": false,
  "deviceCountLimit": 0,
  "deviceCount": 0,
  "links": [
    {
      "rel": "self",
      "href": "https://jeff243.cloudpath.net/admin/apiv2/5XcTc6SjkHDL/dpskPools/AccountDpskPool-14dc1ed8-ba2a-43bd-8cad-e30dc5f20fb8/dpsks/AccountDpsk-5ed29464-d571-48be-a0d0-7574ab87b93d",
      "hreflang": null,
      "media": null,
      "title": null,
      "type": null,
      "deprecation": null
    },
    {
      "rel": "parent",
      "href": "https://jeff243.cloudpath.net/admin/apiv2/5XcTc6SjkHDL/dpskPools/AccountDpskPool-14dc1ed8-ba2a-43bd-8cad-e30dc5f20fb8",
      "hreflang": null,
      "media": null,
      "title": null,
      "type": null,
      "deprecation": null
    },
    {
      "rel": "devices",
      "href": "https://jeff243.cloudpath.net/admin/apiv2/5XcTc6SjkHDL/dpskPools/AccountDpskPool-14dc1ed8-ba2a-43bd-8cad-e30dc5f20fb8/dpsks/AccountDpsk-5ed29464-d571-48be-a0d0-7574ab87b93d/devices?page=1&pageSize=10{&filter,orderBy}",
      "hreflang": null,
      "media": null,
      "title": null,
      "type": null,
      "deprecation": null
    }
  ]
},
{
  "guid": "AccountDpsk-e7e2fe17-912d-4826-8010-05f3263f8fe8",
  "name": "DPSK32",
  "passphrase": "wilfyhhumqc",
  "status": "ACTIVE",
  "ssidList": [],
  "expirationDateTime": "2020-07-27T06:00:00Z",
  "useDeviceCountLimit": false,
  "deviceCountLimit": 0,
  "deviceCount": 0,
  "links": [
    {
      "rel": "self",
      "href": "https://jeff243.cloudpath.net/admin/apiv2/5XcTc6SjkHDL/dpskPools/AccountDpskPool-14dc1ed8-ba2a-43bd-8cad-e30dc5f20fb8/dpsks/AccountDpsk-e7e2fe17-912d-4826-8010-05f3263f8fe8",

```

## Core Cloudpath APIs

### DSPK Resources and URIs

```
    "hreflang": null,
    "media": null,
    "title": null,
    "type": null,
    "deprecation": null
  },
  {
    "rel": "parent",
    "href": "https://jeff243.cloudpath.net/admin/apiv2/5XcTc6SjkHDL/dpskPools/AccountDpskPool-14dc1ed8-ba2a-43bd-8cad-e30dc5f20fb8",
    "hreflang": null,
    "media": null,
    "title": null,
    "type": null,
    "deprecation": null
  },
  {
    "rel": "devices",
    "href": "https://jeff243.cloudpath.net/admin/apiv2/5XcTc6SjkHDL/dpskPools/AccountDpskPool-14dc1ed8-ba2a-43bd-8cad-e30dc5f20fb8/dpsks/AccountDpsk-e7e2fe17-912d-4826-8010-05f3263f8fe8/devices?page=1&pageSize=10{&filter,orderBy}",
    "hreflang": null,
    "media": null,
    "title": null,
    "type": null,
    "deprecation": null
  }
]
},
{
  "guid": "AccountDpsk-fce6d0e6-19a1-464c-850c-31bde9472c52",
  "name": "DPSK33",
  "passphrase": "zygrjkezfry",
  "status": "ACTIVE",
  "ssidList": [],
  "expirationDateTime": "2020-07-27T06:00:00Z",
  "useDeviceCountLimit": false,
  "deviceCountLimit": 0,
  "deviceCount": 0,
  "links": [
    {
      "rel": "self",
      "href": "https://jeff243.cloudpath.net/admin/apiv2/5XcTc6SjkHDL/dpskPools/AccountDpskPool-14dc1ed8-ba2a-43bd-8cad-e30dc5f20fb8/dpsks/AccountDpsk-fce6d0e6-19a1-464c-850c-31bde9472c52",
      "hreflang": null,
      "media": null,
      "title": null,
      "type": null,
      "deprecation": null
    },
    {
      "rel": "parent",
      "href": "https://jeff243.cloudpath.net/admin/apiv2/5XcTc6SjkHDL/dpskPools/AccountDpskPool-14dc1ed8-ba2a-43bd-8cad-e30dc5f20fb8",
      "hreflang": null,
      "media": null,
      "title": null,
      "type": null,
      "deprecation": null
    },
    {
      "rel": "devices",
      "href": "https://jeff243.cloudpath.net/admin/apiv2/5XcTc6SjkHDL/dpskPools/AccountDpskPool-14dc1ed8-ba2a-43bd-8cad-e30dc5f20fb8/dpsks/AccountDpsk-fce6d0e6-19a1-464c-850c-31bde9472c52/devices?page=1&pageSize=10{&filter,orderBy}",
      "hreflang": null,
      "media": null,
      "title": null,
      "type": null,
      "deprecation": null
    }
  ]
}
```

```

    ]
  }
}

```

### Example of Sorting a GET Call

This example demonstrates how to sort a GET call by using the *sortBy* parameter. For a list of properties that support sorting, refer to [Table 42](#). Suppose you want to sort on the name of the DSPK, in descending order. You would add the following string to the URI: `?sortBy=name:desc`

#### URI:

This example uses the following URI:

```

https://Jeff243.cloudpath.net/admin/apiv2/5XcTc6SjkHDL/dpskPools/AccountDpskPool-14dc1ed8-ba2a-43bd-8cad-e30dc5f20fb8/dpsks/?sortBy=name:desc

```

where:

- `https://Jeff243.cloudpath.net/admin/apiv2` is the root URI of the Cloudpath system being used (must include `https`, as shown)
- `5XcTc6SjkHDL` is an example of an API key generated from the **Configuration > API Keys** section of the Cloudpath UI
- `AccountDpskPool-14dc1ed8-ba2a-43bd-8cad-e30dc5f20fb8` is the GUID of the DSPK pool from which you want to sort the DSPKs by adding sorting criteria to the URI.
- `?sortBy=name:desc` is the sorting criteria that denotes that you want to display DSPKs by name, in descending order.

#### Request Headers:

The following table shows the required request headers for this URI example, with an example value of an active token that must be pasted into the Authorization header value:

**TABLE 49** Request Headers

Key	Value
Content-type	application/json
Authorization	eyJhbGciOiJIUzI1NiJ9.eyJzdWiiOiJqZWZmLnJob2RpZUBjb21tc2NvcGUuY29tIiwicm9sZVBrIjoiaWJwMDAiLCJhY2NvdW50QWRtaW50Qayl6ljlilCJhcGILZXkiOiJaV2NjTGpQZUdZMGUilCJpYXQiOiJlNzU1NzUxNTcslmV4cCl6MTU3NTU3NTQ1N30.2q4KTyDUevkAAz7mJyp529Be1-ip3EC8P06Xarmz5ao

#### Request Body:

No request body is needed

#### Action:

Use the **GET** action to send the request.

#### Response Body:

Once the request is sent, you will receive a "Status: 200 OK" if the GET is successful. The response body below lists the information based on how you used the *sortBy* parameter. As shown below, the DSPKs have been sorting by name in descending order.

#### NOTE

One DSPK has been added to the pool since the original six DSPKs were shown earlier; this is reflected in the total count below showing as 7.

```

{
  "page": {
    "page": 1,
    "pageSize": 7,
    "totalCount": 7
  },

```

## Core Cloudpath APIs

### DSPK Resources and URIs

```
"contents": [
  {
    "guid": "AccountDpsk-0d37afce-84c5-4d42-9fc8-43c4f1d19b65",
    "name": "dpsk51",
    "passphrase": "qsrmlddiecca",
    "status": "ACTIVE",
    "ssidList": [],
    "expirationDateTime": "2020-12-21T07:00:00Z",
    "useDeviceCountLimit": true,
    "deviceCountLimit": 7,
    "deviceCount": 0,
    "vlanid": "2",
    "overrideReauthentication": 86400,
    "links": [
      {
        "rel": "self",
        "href": "https://jeff243.cloudpath.net/admin/apiv2/5XcTc6SjkHDL/dpskPools/AccountDpskPool-14dc1ed8-ba2a-43bd-8cad-e30dc5f20fb8/dpsks/AccountDpsk-0d37afce-84c5-4d42-9fc8-43c4f1d19b65",
        "hreflang": null,
        "media": null,
        "title": null,
        "type": null,
        "deprecation": null
      },
      {
        "rel": "parent",
        "href": "https://jeff243.cloudpath.net/admin/apiv2/5XcTc6SjkHDL/dpskPools/AccountDpskPool-14dc1ed8-ba2a-43bd-8cad-e30dc5f20fb8",
        "hreflang": null,
        "media": null,
        "title": null,
        "type": null,
        "deprecation": null
      },
      {
        "rel": "devices",
        "href": "https://jeff243.cloudpath.net/admin/apiv2/5XcTc6SjkHDL/dpskPools/AccountDpskPool-14dc1ed8-ba2a-43bd-8cad-e30dc5f20fb8/dpsks/AccountDpsk-0d37afce-84c5-4d42-9fc8-43c4f1d19b65/devices?page=1&pageSize=10{&filter,orderBy}",
        "hreflang": null,
        "media": null,
        "title": null,
        "type": null,
        "deprecation": null
      }
    ]
  },
  {
    "guid": "AccountDpsk-e45f6b14-2cff-4c8d-b44e-102fd67fe02c",
    "name": "DPSK23",
    "passphrase": "xz hjmjzdao",
    "status": "ACTIVE",
    "ssidList": [],
    "expirationDateTime": "2020-07-27T06:00:00Z",
    "useDeviceCountLimit": false,
    "deviceCountLimit": 0,
    "deviceCount": 0,
    "links": [
      {
        "rel": "self",
        "href": "https://jeff243.cloudpath.net/admin/apiv2/5XcTc6SjkHDL/dpskPools/AccountDpskPool-14dc1ed8-ba2a-43bd-8cad-e30dc5f20fb8/dpsks/AccountDpsk-e45f6b14-2cff-4c8d-b44e-102fd67fe02c",
        "hreflang": null,
        "media": null,
        "title": null,
        "type": null,
        "deprecation": null
      },
      {
        "rel": "parent",
```

```

    "href": "https://jeff243.cloudpath.net/admin/apiv2/5XcTc6SjkHDL/dpskPools/
AccountDpskPool-14dc1ed8-ba2a-43bd-8cad-e30dc5f20fb8",
    "hreflang": null,
    "media": null,
    "title": null,
    "type": null,
    "deprecation": null
  },
  {
    "rel": "devices",
    "href": "https://jeff243.cloudpath.net/admin/apiv2/5XcTc6SjkHDL/dpskPools/
AccountDpskPool-14dc1ed8-ba2a-43bd-8cad-e30dc5f20fb8/dpsks/AccountDpsk-e45f6b14-2cff-4c8d-b44e-102fd67fe02c/
devices?page=1&pageSize=10{&filter,orderBy}",
    "hreflang": null,
    "media": null,
    "title": null,
    "type": null,
    "deprecation": null
  }
]
},
{
  "guid": "AccountDpsk-bc993a37-05f4-4a39-8fe3-6a888b35f2c1",
  "name": "DPSK30",
  "passphrase": "uooosztyuoel",
  "status": "ACTIVE",
  "ssidList": [],
  "expirationDateTime": "2020-07-27T06:00:00Z",
  "useDeviceCountLimit": false,
  "deviceCountLimit": 0,
  "deviceCount": 0,
  "links": [
    {
      "rel": "self",
      "href": "https://jeff243.cloudpath.net/admin/apiv2/5XcTc6SjkHDL/dpskPools/
AccountDpskPool-14dc1ed8-ba2a-43bd-8cad-e30dc5f20fb8/dpsks/AccountDpsk-
bc993a37-05f4-4a39-8fe3-6a888b35f2c1",
      "hreflang": null,
      "media": null,
      "title": null,
      "type": null,
      "deprecation": null
    },
    {
      "rel": "parent",
      "href": "https://jeff243.cloudpath.net/admin/apiv2/5XcTc6SjkHDL/dpskPools/
AccountDpskPool-14dc1ed8-ba2a-43bd-8cad-e30dc5f20fb8",
      "hreflang": null,
      "media": null,
      "title": null,
      "type": null,
      "deprecation": null
    },
    {
      "rel": "devices",
      "href": "https://jeff243.cloudpath.net/admin/apiv2/5XcTc6SjkHDL/dpskPools/
AccountDpskPool-14dc1ed8-ba2a-43bd-8cad-e30dc5f20fb8/dpsks/AccountDpsk-bc993a37-05f4-4a39-8fe3-6a888b35f2c1/
devices?page=1&pageSize=10{&filter,orderBy}",
      "hreflang": null,
      "media": null,
      "title": null,
      "type": null,
      "deprecation": null
    }
  ]
},
{
  "guid": "AccountDpsk-5ed29464-d571-48be-a0d0-7574ab87b93d",
  "name": "DPSK31",
  "passphrase": "jekgqviayiv",
  "status": "ACTIVE",
  "ssidList": [],

```

## Core Cloudpath APIs

### DSPK Resources and URIs

```
"expirationDateTime": "2020-07-27T06:00:00Z",
"useDeviceCountLimit": false,
"deviceCountLimit": 0,
"deviceCount": 0,
"links": [
  {
    "rel": "self",
    "href": "https://jeff243.cloudpath.net/admin/apiv2/5XcTc6SjkHDL/dpskPools/AccountDpskPool-14dc1ed8-ba2a-43bd-8cad-e30dc5f20fb8/dpsks/AccountDpsk-5ed29464-d571-48be-a0d0-7574ab87b93d",
    "hreflang": null,
    "media": null,
    "title": null,
    "type": null,
    "deprecation": null
  },
  {
    "rel": "parent",
    "href": "https://jeff243.cloudpath.net/admin/apiv2/5XcTc6SjkHDL/dpskPools/AccountDpskPool-14dc1ed8-ba2a-43bd-8cad-e30dc5f20fb8",
    "hreflang": null,
    "media": null,
    "title": null,
    "type": null,
    "deprecation": null
  },
  {
    "rel": "devices",
    "href": "https://jeff243.cloudpath.net/admin/apiv2/5XcTc6SjkHDL/dpskPools/AccountDpskPool-14dc1ed8-ba2a-43bd-8cad-e30dc5f20fb8/dpsks/AccountDpsk-5ed29464-d571-48be-a0d0-7574ab87b93d/devices?page=1&pageSize=10{&filter,orderBy}",
    "hreflang": null,
    "media": null,
    "title": null,
    "type": null,
    "deprecation": null
  }
]
},
{
  "guid": "AccountDpsk-e7e2fe17-912d-4826-8010-05f3263f8fe8",
  "name": "DPSK32",
  "passphrase": "wilfyhhumqc",
  "status": "ACTIVE",
  "ssidList": [],
  "expirationDateTime": "2020-07-27T06:00:00Z",
  "useDeviceCountLimit": false,
  "deviceCountLimit": 0,
  "deviceCount": 0,
  "links": [
    {
      "rel": "self",
      "href": "https://jeff243.cloudpath.net/admin/apiv2/5XcTc6SjkHDL/dpskPools/AccountDpskPool-14dc1ed8-ba2a-43bd-8cad-e30dc5f20fb8/dpsks/AccountDpsk-e7e2fe17-912d-4826-8010-05f3263f8fe8",
      "hreflang": null,
      "media": null,
      "title": null,
      "type": null,
      "deprecation": null
    },
    {
      "rel": "parent",
      "href": "https://jeff243.cloudpath.net/admin/apiv2/5XcTc6SjkHDL/dpskPools/AccountDpskPool-14dc1ed8-ba2a-43bd-8cad-e30dc5f20fb8",
      "hreflang": null,
      "media": null,
      "title": null,
      "type": null,
      "deprecation": null
    }
  ]
}
```

```

    "rel": "devices",
    "href": "https://jeff243.cloudpath.net/admin/apiv2/5XcTc6SjkHDL/dpskPools/
AccountDpskPool-14dc1ed8-ba2a-43bd-8cad-e30dc5f20fb8/dpsks/AccountDpsk-e7e2fe17-912d-4826-8010-05f3263f8fe8/
devices?page=1&pageSize=10{&filter,orderBy}",
    "hreflang": null,
    "media": null,
    "title": null,
    "type": null,
    "deprecation": null
  }
]
},
{
  "guid": "AccountDpsk-fce6d0e6-19a1-464c-850c-31bde9472c52",
  "name": "DPSK33",
  "passphrase": "zygrjkezfry",
  "status": "ACTIVE",
  "ssidList": [],
  "expirationDateTime": "2020-07-27T06:00:00Z",
  "useDeviceCountLimit": false,
  "deviceCountLimit": 0,
  "deviceCount": 0,
  "links": [
    {
      "rel": "self",
      "href": "https://jeff243.cloudpath.net/admin/apiv2/5XcTc6SjkHDL/dpskPools/
AccountDpskPool-14dc1ed8-ba2a-43bd-8cad-e30dc5f20fb8/dpsks/AccountDpsk-
fce6d0e6-19a1-464c-850c-31bde9472c52",
      "hreflang": null,
      "media": null,
      "title": null,
      "type": null,
      "deprecation": null
    },
    {
      "rel": "parent",
      "href": "https://jeff243.cloudpath.net/admin/apiv2/5XcTc6SjkHDL/dpskPools/
AccountDpskPool-14dc1ed8-ba2a-43bd-8cad-e30dc5f20fb8",
      "hreflang": null,
      "media": null,
      "title": null,
      "type": null,
      "deprecation": null
    }
  ],
  {
    "rel": "devices",
    "href": "https://jeff243.cloudpath.net/admin/apiv2/5XcTc6SjkHDL/dpskPools/
AccountDpskPool-14dc1ed8-ba2a-43bd-8cad-e30dc5f20fb8/dpsks/AccountDpsk-fce6d0e6-19a1-464c-850c-31bde9472c52/
devices?page=1&pageSize=10{&filter,orderBy}",
    "hreflang": null,
    "media": null,
    "title": null,
    "type": null,
    "deprecation": null
  }
]
},
{
  "guid": "AccountDpsk-4b67741c-5b87-48dc-b3c8-306f28ee7a38",
  "name": "DPSK15",
  "passphrase": "cemqwzmzgit",
  "status": "ACTIVE",
  "ssidList": [],
  "expirationDateTime": "2020-12-06T07:00:00Z",
  "useDeviceCountLimit": false,
  "deviceCountLimit": 0,
  "deviceCount": 0,
  "vlanid": "44",
  "links": [
    {
      "rel": "self",
      "href": "https://jeff243.cloudpath.net/admin/apiv2/5XcTc6SjkHDL/dpskPools/

```

```

AccountDpskPool-14dc1ed8-ba2a-43bd-8cad-e30dc5f20fb8/dpsks/AccountDpsk-4b67741c-5b87-48dc-
b3c8-306f28ee7a38",
    "hreflang": null,
    "media": null,
    "title": null,
    "type": null,
    "deprecation": null
  },
  {
    "rel": "parent",
    "href": "https://jeff243.cloudpath.net/admin/apiv2/5XcTc6SjkHDL/dpskPools/
AccountDpskPool-14dc1ed8-ba2a-43bd-8cad-e30dc5f20fb8",
    "hreflang": null,
    "media": null,
    "title": null,
    "type": null,
    "deprecation": null
  },
  {
    "rel": "devices",
    "href": "https://jeff243.cloudpath.net/admin/apiv2/5XcTc6SjkHDL/dpskPools/
AccountDpskPool-14dc1ed8-ba2a-43bd-8cad-e30dc5f20fb8/dpsks/AccountDpsk-4b67741c-5b87-48dc-b3c8-306f28ee7a38/
devices?page=1&pageSize=10{&filter,orderBy}",
    "hreflang": null,
    "media": null,
    "title": null,
    "type": null,
    "deprecation": null
  }
]
}
]
}

```

## DPSK Devices

You can use REST API v2 calls to obtain information about all devices that are connected to a specific DPSK.

The following table lists the properties that can be used in the body of a DPSK device-related request and/or are provided in the response body.

**TABLE 50** Resource: DPSK Devices

Property Name	Type	Editable	Filter or Sort	Optional in Request/Response Body?	Description
guid	String	No	Neither	Yes (No device guid needs to be given because the GET call on devices is only for <i>all</i> devices associated with a specific DPSK.)	The unique identifier for this device
displayName	String	No	sortBy, like	Yes	The display name for this device
macAddress	String	No	sortBy, like	No	The MAC address for this device
pmk	String	No	Neither	No	The pmk assigned to this device.
ssid	String	No	sortBy, like	No	The SSID this device is connected to
createdDate	String <date>	No	sortBy	No	The date that this device was created



### DPSK Devices URIs and Actions

The following table indicates the URIs that you can append to the root URI, along with the action you can take, and possible return codes you can receive.

**TABLE 51** DPSK Devices URIs and Actions

URI	Action	Description	Return Codes
/dpskPools/{poolId}/dpsks / {dpskGuid}/devices	GET	Returns the list of devices that are on the specified DPSK.	200 - OK 401 - Unauthorized 404 -Not Found
	POST	Creates a device in the identified dpsks.	200 - OK 401 - Unauthorized 404 -Not Found
/dpskPools/{poolId}/dpsks/{dpskId}/ devices/{Guid}	GET	Returns the specified device.	200 - OK 401 - Unauthorized 404 -Not Found
	PUT	Updates the specified device.	200 - OK 401 - Unauthorized 404 -Not Found
	DELETE	Deletes the specified device.	200 - OK 204 - No content 401 - Unauthorized 404 -Not Found

### Example of Using GET to Obtain Information About Devices Connected to a Specific DPSK

This example demonstrates how to use a GET call to obtain a list of devices connected to a DPSK. In this example, two devices exist on DPSK15, as shown at the bottom of the following figure:

**FIGURE 4** DPSK Device Information

### PSK Information

Reference Name: DPSK15

Status: ● Active Revoke

GUID: AccountDpsk-4b67741c-5b87-48dc-b3c8-306f28ee7a38

SSID(s): SSID19;SSID20 (Defaults from DPSK Pool)

Pre-Shared Key: \*\*\*\*\* 🔍

DPSK Pool: DPSK Pool 20

Expiration Date: 20201206

VLAN ID: 44

Reauthentication:

Devices: 2 of 4 (Defaults from DPSK Pool).

	Reference Name	MAC Address	SSID	Created	GUID	Last Assigned Policy
<span style="border: 1px solid #3498db; padding: 2px 5px; border-radius: 3px;">Add Device</span>	Device1	112233445566	Jeff eDPSK	20200727 1735	AccountDpskDevice-38bc954e-6c5a-4324-8bde-77b3180bda93	
	Device2	112233445567	Jeff eDPSK2	20200727 1737	AccountDpskDevice-fd0227e1-9364-4e70-a78d-3e6657ee615b	

**URI:**

This example uses the following URI:

```
https://Jeff243.cloudpath.net/admin/apiv2/5XcTc6SjkHDL/dpskPools/AccountDpskPool-14dc1ed8-ba2a-43bd-8cad-e30dc5f20fb8/dpsks/AccountDpsk-4b67741c-5b87-48dc-b3c8-306f28ee7a38/devices
```

where:

- https://Jeff243.cloudpath.net/admin/apiv2 is the root URI of the Cloudpath system being used (must include https, as shown)
- 5XcTc6SjkHDL is an example of an API key generated from the **Configuration > API Keys** section of the Cloudpath UI
- AccountDpskPool-14dc1ed8-ba2a-43bd-8cad-e30dc5f20fb8 is the GUID of the DPSK pool that the DPSK belongs to.
- AccountDpsk-4b67741c-5b87-48dc-b3c8-306f28ee7a38 is the GUID of DPSK15, which is the DPSK whose devices will be displayed upon a successful GET request.

**Request Headers:**

The following table shows the required request headers for this URI example, with an example value of an active token that must be pasted into the Authorization header value:

**TABLE 52** Request Headers

Key	Value
Content-type	application/json

**TABLE 52** Request Headers (continued)

Key	Value
Authorization	eyJhbGciOiJIUzI1NiJ9.eyJzdWl0IjoiZmVlLnJob2RpZUBjb21tc2NvcGUuY29tIiwicm9sZVBrIjoieWMDAilCjY2NvdW50QWRtaW5QayI6IjIiLCJhcGILZXRkiOiJaV2NjTGpQZUdZMGUilCjYXQjOjE1NzU1NzUxNTcslmV4cCl6MTU3NTU3NTQ1N30.2q4KTyDUevkAAz7mJyp529Be1-ip3EC8P06Xarmz5ao

**Request Body:**

No request body is needed for this request. All the necessary information is in the URI.

**Action:**

Use the **GET** action to send the request.

**Response Body:**

Once the request is sent, you will receive a "Status: 200 OK" if the GET is successful. The response body below lists information for the two devices connected to the DPSK. You can check the output against what is shown in the UI (see figure above).

```
{
  "page": {
    "page": 1,
    "pageSize": 2,
    "totalCount": 2
  },
  "contents": [
    {
      "guid": "AccountDpskDevice-fd0227e1-9364-4e70-a78d-3e6657ee615b",
      "displayName": "Device2",
      "macAddress": "112233445567",
      "pmk": "",
      "ssid": "Jeff eDPSK2",
      "createdDate": "2020-07-27T23:37:11Z",
      "links": [
        {
          "rel": "self",
          "href": "https://jeff243.cloudpath.net/admin/apiv2/5XcTc6SjkHDL/dpskPools/AccountDpskPool-14dc1ed8-ba2a-43bd-8cad-e30dc5f20fb8/dpsks/AccountDpsk-4b67741c-5b87-48dc-b3c8-306f28ee7a38/devices/AccountDpskDevice-fd0227e1-9364-4e70-a78d-3e6657ee615b",
          "hreflang": null,
          "media": null,
          "title": null,
          "type": null,
          "deprecation": null
        },
        {
          "rel": "parent",
          "href": "https://jeff243.cloudpath.net/admin/apiv2/5XcTc6SjkHDL/dpskPools/AccountDpskPool-14dc1ed8-ba2a-43bd-8cad-e30dc5f20fb8/dpsks/AccountDpsk-4b67741c-5b87-48dc-b3c8-306f28ee7a38",
          "hreflang": null,
          "media": null,
          "title": null,
          "type": null,
          "deprecation": null
        }
      ]
    },
    {
      "guid": "AccountDpskDevice-38bc954e-6c5a-4324-8bde-77b3180bda93",
      "displayName": "Device1",
      "macAddress": "112233445566",
      "pmk": "",
      "ssid": "Jeff eDPSK",
      "createdDate": "2020-07-27T23:35:32Z",
      "links": [
        {
          "rel": "self",
```

```

        "href": "https://jeff243.cloudpath.net/admin/apiv2/5XcTc6SjkHDL/dpskPools/AccountDpskPool-14dc1ed8-ba2a-43bd-8cad-e30dc5f20fb8/dpsks/AccountDpsk-4b67741c-5b87-48dc-b3c8-306f28ee7a38/devices/AccountDpskDevice-38bc954e-6c5a-4324-8bde-77b3180bda93",
        "hreflang": null,
        "media": null,
        "title": null,
        "type": null,
        "deprecation": null
    },
    {
        "rel": "parent",
        "href": "https://jeff243.cloudpath.net/admin/apiv2/5XcTc6SjkHDL/dpskPools/AccountDpskPool-14dc1ed8-ba2a-43bd-8cad-e30dc5f20fb8/dpsks/AccountDpsk-4b67741c-5b87-48dc-b3c8-306f28ee7a38",
        "hreflang": null,
        "media": null,
        "title": null,
        "type": null,
        "deprecation": null
    }
]
}
}
}

```

## Assigned Policies

You can use REST API v2 calls to assign policies to DPSK pools and certificate templates.

The following table lists the properties that can be used in the body of an assigned-policy-related request and/or are provided in the response body. (In the "Optional" column, if a default value is applicable, it is listed in angle brackets (< >).

**TABLE 53** Resource: AssignedPolicy

Property Name	Type	Editable	Sort/Filter	Optional in Request/Response Body?	Description
priority	Long	Yes	No	Optional on create only, but not on any subsequent uses	The priority, within the list of assigned policies, that this policy should be evaluated.
useCount	Long	Yes (can only be edited to 0)	No	No	The number of times this policy has been assigned, or reassigned, to the pool. Can be reset to 0.
link	Link	No	No	Yes	This includes three href links that can be used in other API calls: <ul style="list-style-type: none"> <li>self: This link includes both the ID of the DPSK pool (the parent of the assigned policy) and the ID of the assigned policy.</li> <li>policy: This link contains the ID of the assigned policy.</li> <li>parent: This link contains the ID of the parent of the assigned policy, which in this case is the DPSK pool.</li> </ul>

## Assigned Policies URIs and Actions

The following table indicates the URIs that you can append to the root URI, along with the actions you can take, and possible return codes you can receive.

**TABLE 54** Assigned Policies URIs and Actions

URI	Action	Description	Return Codes
/dpskPools/{dpskPoolId}/policies	GET	Returns the list of policies assigned to this DPSK pool, and includes the use count for each policy and its priority in the list of policies.	200 - OK 401 - Unauthorized 404 -Not Found
/dpskPools/{dpskPoolId}/policies/{policyId}	GET	Returns information about the specified policy assigned to this DPSK pool, including the use count for this policy, its priority in the list, and all its href links.	200 - OK 401 - Unauthorized 404 - Not Found
	DELETE	Removes the policy from the list of assigned policies and reorders the list accordingly.	200 - OK 201 - No Content 401-Unauthorized 404 - Not Found
	PUT	Adds the policy to the list of assigned policies. If the policy is already in the list, you can use the allowed properties to reset the use count to 0 and to re-prioritize this policy in the list. This policy can also be the first one assigned to the pool.  <b>NOTE</b> You can perform a GET request on policies to obtain the ID of the policy you want to assign to the pool. Refer to <a href="#">Table 36</a> on page 31.	200 - OK 401-Unauthorized 404 -Not Found
/certificateTemplates/{guid}/policies	GET	Returns the list of policies assigned to this certificate template, and includes the use count and the priority of each policy in the list.	200 - OK 401 - Unauthorized 404 -Not Found

**TABLE 54** Assigned Policies URIs and Actions (continued)

URI	Action	Description	Return Codes
/certificateTemplates/{guid}/policies/{policyId}	GET	Returns information about the specified policy assigned to this certificate template, including the use count for this policy, its priority in the list, and all its href links.	200 - OK 401 - Unauthorized 404 - Not Found
	DELETE	Removes the policy from the list of assigned policies and reorders the list accordingly.	200 - OK 201 - No Content 401-Unauthorized 404 - Not Found
	PUT	Adds the policy to the list of assigned policies. If the policy is already in the list, you can use the allowed properties to reset the use count to 0 and to re-prioritize this policy in the list. This policy can also be the first one assigned to the certificate.  <b>NOTE</b> You can perform a GET request on policies to obtain the ID of the policy you want to assign to the certificate. Refer to <a href="#">Table 36</a> on page 31.	200 - OK 401-Unauthorized 404 -Not Found

## Example of Using PUT to Assign a Policy to a DPSK Pool

This example demonstrates how to assign an existing policy to a DPSK pool by using a REST API PUT call.

### URI:

This example uses the following URI:

```
https://Jeff243.cloudpath.net/admin/apiv2/5XcTc6SjkHDL/dpskPools/AccountDpskPool-14dc1ed8-ba2a-43bd-8cad-e30dc5f20fb8/policies/2
```

where:

- https://Jeff243.cloudpath.net/admin/apiv2 is the root URI of the Cloudpath system being used (must include https, as shown)
- 5XcTc6SjkHDL is an example of an API key generated from the **Configuration > API Keys** section of the Cloudpath UI
- AccountDpskPool-14dc1ed8-ba2a-43bd-8cad-e30dc5f20fb8 is the GUID of the DPSK pool to which this policy is being assigned.
- 2 is the ID of the policy being assigned.

### NOTE

You can perform a GET request on policies to obtain the ID of the policy you want to assign to the pool. Refer to [Table 36](#) on page 31.

### Request Headers:

The following table shows the required request headers for this URI example, with an example value of an active token that must be pasted into the Authorization header value:

**TABLE 55** Request Headers

Key	Value
Content-type	application/json
Authorization	eyJhbGciOiJIUzI1NiJ9.eyJzdWiiOiJqZWZmLnJob2RpZUBjb21tc2NvcGUuY29tliwicm9sZVBrIjoieWMDAilCjY2NvdW50QWRtaW5QayI6IjIiLiJhcGILZXiOiJlV2NjTGpQZUdZMGUilCjYXQkQjE1NzU1NzUxNTcslmV4Cl6MTU3NTU3NTQ1N30.2q4KTyDUevkAAz7mJyp529Be1-ip3EC8P06Xarmz5ao

**Request Body:**

The following is an example of a request body for assigning a policy to a DPSK pool.

```
{
  "useCount": 0,
  "priority": 0
}
```

**Action:**

Use the **PUT** action to send the request.

**Response Body:**

Once the request is sent, you will receive a "Status: 200 OK" if the PUT is successful. You can see that the response body below matches what was requested in the request body above.

```
{
  "useCount": 0,
  "priority": 0,
  "links": [
    {
      "rel": "self",
      "href": "https://jeff243.cloudpath.net/admin/apiv2/5XcTc6SjkHDL/dpskPools/AccountDpskPool-14dc1ed8-ba2a-43bd-8cad-e30dc5f20fb8/policies/2",
      "hreflang": null,
      "media": null,
      "title": null,
      "type": null,
      "deprecation": null
    },
    {
      "rel": "policy",
      "href": "https://jeff243.cloudpath.net/admin/apiv2/5XcTc6SjkHDL/policies/2",
      "hreflang": null,
      "media": null,
      "title": null,
      "type": null,
      "deprecation": null
    },
    {
      "rel": "parent",
      "href": "https://jeff243.cloudpath.net/admin/apiv2/5XcTc6SjkHDL/dpskPools/AccountDpskPool-14dc1ed8-ba2a-43bd-8cad-e30dc5f20fb8",
      "hreflang": null,
      "media": null,
      "title": null,
      "type": null,
      "deprecation": null
    }
  ]
}
```

# Property Management

## Properties

You can use REST API v2 calls to obtain information about existing properties, to create or edit properties, and to delete properties.

The following table lists the properties that can be used in the body of a properties-related request and/or are provided in the response body. (In the "Optional" column, if a default value is applicable, it is listed in angle brackets (< >).)

**TABLE 56** Resource: Properties

Property Name	Type	Editable	Sort/Filter	Optional in Request/Response Body?	Description
guid	String	No	sortBy, like	Optional on create only, but not on any subsequent uses.	The unique identifier for this property.
name	String	Yes	sortBy, like	No	The display name for this property, must be unique
address	String	Yes	sortBy, like	Yes	The address for this property.
description	String	Yes	sortBy, like	Yes	A description for this property.
enforceMaxUnits	Boolean	Yes	sortBy, like	Yes<false>	Indicates if a value configured for "max units" will be enforced when adding a unit to the property.
maxUnits	int	Yes	sortBy, like	No<0>	The maximum number of units permitted for this property.
allowSeparateGuestSecret	Boolean	Yes	sortBy, like	Yes<true>	Indicates whether units assigned to this property will have a separate secret for a separate guest network. This value may not be changed once the first unit is assigned to this property.
ssids	Array<String >	No	No	Yes	This is the list of ssids that are available to this property by means of the DPSK pool that this property is assigned to.
managementName	String	Yes	sortBy, like	Yes	Name that will be assigned in all email and SMS communications.
managementPhone	String	Yes	sortBy, like	Yes	Phone that will be assigned in all email and SMS communications.
managementEmail	String	Yes	sortBy, like	Yes	Email that will be assigned in all email and SMS communications
tenantPortalHelpText	String	Yes	Neither	Yes	Help text that will be provided to users of the tenant portal.
tenantPortalAnnouncements	String	Yes	Neither	Yes	Announcements that will be provided to users of the tenant portal.
links self, units, dpskPool, uiConfiguration	Link	Yes*	sortBy, like (dpskPool)	Optional on create only, but not on any subsequent uses.	Self-referencing link, dpskPool, uiConfiguration link, and link to the list of units associated with this property. The "dpskPool" link is a required link that must be provided on a POST. The link can be changed, but only if there are no units associated with the property. Otherwise, a "422 Unprocessable Entity" error is generated.



**TABLE 57** Resource: UiConfiguration

Property Name	Type	Editable	Sort/Filter	Optional in Request/Response Body?	Description
tenantTitle	String	Yes	No	Yes	The title to use in the Tenant UI.
tenantSubtitle	String	Yes	No	Yes	The subtitle to use in the Tenant UI.
mainColor	String	Yes	No	Yes	The main color is used for the main header and any buttons or links. White text will be used on top of this color.
accentColor	String	Yes	No	Yes	The accent color is used for sub-headers and borders.
separatorColor	String	Yes	No	Yes	The separator color is used for lines in between rows of data.
textColor	String	Yes	No	Yes	The text color is the default text color used to display information throughout the portal.
logoFileName	String	NO	No	Yes	The name of the logo file, if one has been uploaded. This will be updated when the logo file is changed via the logo file link.
links					logoFile, self, and property

### Properties URIs and Actions

The following table indicates the URIs that you can append to the root URI, along with the actions you can take, and possible return codes you can receive.

**TABLE 58** Property URIs and Actions

URI	Action	Description	Return Codes
/properties	GET	Returns the list of properties that are in the system.	401 - Unauthorized 200 - OK
	POST	Creates a property within the system.  The "dpskPool" link must be provided on a POST. The link can be changed only if there are no units yet associated with the property; otherwise, a "422 Unprocessable Entity" error is returned.	422- Unprocessable Entity 401 - Unauthorized 201 - Created
/properties/{guid}	GET	Returns the details about the property specified.	404 - Not found 401 - Unauthorized 200 - OK
	PUT	Updates details about property specified. If the PUT request body includes a change to the "dpskPool" link, the change is evaluated; if there are no units assigned to the property, the change is applied. Otherwise, the change to the "dpskPool" link will generate a "422 Unprocessable Entity" error.	422 - Unprocessable Entity 404 - Not found 401 - Unauthorized 200 - OK
	DELETE	Removes the specified property, all its associated units, the DPSKs associated with the units, and all child devices associated with the DPSKs.	401 - Unauthorized 204 - No content 200 - OK

**TABLE 58** Property URIs and Actions (continued)

URI	Action	Description	Return Codes
/properties/{guid}/uiConfiguration	GET	Returns the details of the tenant portal UI configuration.	404 - Not found 401 - Unauthorized 200 - OK
	PUT	Updates the tenant portal UI configuration resource.	404 - Not found 401 - Unauthorized 200 - OK
/properties/{guid}/uiConfiguration/logoFile  /properties/{guid}/uiConfiguration/logoFile/{fileName}	POST	This method allows you to post an image file that will be used for the tenant portal.  <b>NOTE</b> You must include the following Request header: <b>Key:</b> Content-Type <b>Value:</b> multipart/form-data  You can also set a null file if you do not want a logo to appear on the tenant portal. If the file name is null, the logo file is null regardless of the data in the form. If the form data is bad, a "422 - Unprocessable Entity" error code is sent.	422 - Unprocessable Entity 404 - Not found 401 - Unauthorized 200 - OK

### Example of Using GET for Properties

This example demonstrates how to obtain information about all properties that have already been created.

**URI:**

This example uses the following URI:

```
https://Jeff245.cloudpath.net/admin/apiv2/yRCjJObWR6ER/properties
```

where:

- https://Jeff245.cloudpath.net/admin/apiv2 is the root URI of the Cloudpath system being used (must include https, as shown)
- yRCjJObWR6ER is an example of an API key generated from the **Configuration > API Keys** section of the Cloudpath UI

**Request Headers:**

The following table shows the required request headers for this URI example, with an example value of an active token that must be pasted into the Authorization header value:

**TABLE 59** Request Headers

Key	Value
Content-type	application/json
Authorization	eyJhbGciOiJIUzI1NiJ9.eyJzdWIiOiJqZWZmLnJob2RpZUBjb21tc2NvcGUuY29tliwicm9sZVBrIjoiMjEwMDAiLCJhY2NvdW50QWRtaW5QayI6IjIiLCJhcGILZXRkiOiJaV2NjTGpQZUdZMGMuIlCjPjYXQiOiJlNzU1NzUxNTcsmV4cCl6MTU3NTU3NTQ1N30.2q4KTyDUevkAAz7mJyp529Be1-ip3EC8P06Xarmz5ao

**Request Body:**

None required.

**Action:**

Use the **GET** action to send the request.

**Response Body:**

Once the request is sent, you will receive a "Status: 200 OK" if the GET is successful. The response body provides information about all existing properties in your Cloudpath system. In this example, two properties exist.

```
{
  "page": {
    "page": 1,
    "pageSize": 2,
    "totalCount": 2
  },
  "contents": [
    {
      "guid": "Property-afaccdf8-5e39-41ce-9098-9747cc38aaa0",
      "name": "Building 1",
      "address": "",
      "description": "",
      "enforceMaxUnits": false,
      "maxUnits": 0,
      "allowSeparateGuestSecret": true,
      "ssids": [
        "SSID20",
        "SSID19"
      ],
      "managementName": "J. Smith",
      "managementPhone": "0005550100",
      "managementEmail": "js@smith.com",
      "tenantPortalHelpText": "",
      "tenantPortalAnnouncements": "",
      "links": [
        {
          "rel": "self",
          "href": "https://jeff245.cloudpath.net/admin/apiv2/yRCjJObWR6ER/properties/Property-afaccdf8-5e39-41ce-9098-9747cc38aaa0",
          "hreflang": null,
          "media": null,
          "title": null,
          "type": null,
          "deprecation": null
        },
        {
          "rel": "uiConfiguration",
          "href": "https://jeff245.cloudpath.net/admin/apiv2/yRCjJObWR6ER/properties/Property-afaccdf8-5e39-41ce-9098-9747cc38aaa0/uiConfiguration",
          "hreflang": null,
          "media": null,
          "title": null,
          "type": null,
          "deprecation": null
        },
        {
          "rel": "dpskPool",
          "href": "https://jeff245.cloudpath.net/admin/apiv2/yRCjJObWR6ER/dpskPools/AccountDpskPool-6ee78505-926d-433a-aead-1897e4e7ea9e",
          "hreflang": null,
          "media": null,
          "title": null,
          "type": null,
          "deprecation": null
        },
        {
          "rel": "units",
          "href": "/apiv2/yRCjJObWR6ER/properties/Property-afaccdf8-5e39-41ce-9098-9747cc38aaa0/units",
          "hreflang": null,
          "media": null,
          "title": null,
          "type": null,
          "deprecation": null
        }
      ]
    }
  ]
}
```

```
    }
  ],
},
{
  "guid": "Property-01158da4-e28d-4faa-9e57-fcbalac4c9e6",
  "name": "Building 2",
  "address": "",
  "description": "",
  "enforceMaxUnits": false,
  "maxUnits": 0,
  "allowSeparateGuestSecret": false,
  "ssids": [
    "ssid for dpsk pool 1"
  ],
  "managementName": "J. Smith",
  "managementPhone": "0005550100",
  "managementEmail": "js@smith.com",
  "tenantPortalHelpText": "",
  "tenantPortalAnnouncements": "",
  "links": [
    {
      "rel": "self",
      "href": "https://jeff245.cloudpath.net/admin/apiv2/yRCjJObWR6ER/properties/Property-01158da4-e28d-4faa-9e57-fcbalac4c9e6",
      "hreflang": null,
      "media": null,
      "title": null,
      "type": null,
      "deprecation": null
    },
    {
      "rel": "uiConfiguration",
      "href": "https://jeff245.cloudpath.net/admin/apiv2/yRCjJObWR6ER/properties/Property-01158da4-e28d-4faa-9e57-fcbalac4c9e6/uiConfiguration",
      "hreflang": null,
      "media": null,
      "title": null,
      "type": null,
      "deprecation": null
    },
    {
      "rel": "dpskPool",
      "href": "https://jeff245.cloudpath.net/admin/apiv2/yRCjJObWR6ER/dpskPools/AccountDpskPool-4c3e2491-084b-4877-9177-128aef9af006",
      "hreflang": null,
      "media": null,
      "title": null,
      "type": null,
      "deprecation": null
    },
    {
      "rel": "units",
      "href": "/apiv2/yRCjJObWR6ER/properties/Property-01158da4-e28d-4faa-9e57-fcbalac4c9e6/units",
      "hreflang": null,
      "media": null,
      "title": null,
      "type": null,
      "deprecation": null
    }
  ]
}
]
}
```

### Example of Using POST to Create a Property

This example demonstrates how to create a new property in your Cloudpath system by using the REST API POST call.

**URI:**

This example uses the following URI:

```
https://Jeff245.cloudpath.net/admin/apiv2/yRCjJObWR6ER/properties
```

where:

- <https://Jeff245.cloudpath.net/admin/apiv2> is the root URI of the Cloudpath system being used (must include https, as shown)
- yRCjJObWR6ER is an example of an API key generated from the **Configuration > API Keys** section of the Cloudpath UI

**Request Headers:**

The following table shows the required request headers for this URI example, with an example value of an active token that must be pasted into the Authorization header value:

**TABLE 60** Request Headers

Key	Value
Content-type	application/json
Authorization	eyJhbGciOiJIUzI1NiJ9.eyJzdWIiOiJqZWZmLnJob2RpZUBjb21tc2NvcGUuY29tliwicm9sZVBrJjoiMjEwMDAiLCJhY2NvdW50QWRtaW5QayI6IjIiLCJhcGILZXkiOiJhV2NjTGpQZUdZMGUuIiLCJpYXQiOiJlNzU1NzUxNTcslmV4cCI6MTU3NTU3NTQ1N30.2q4KTyDUevkAAz7mJyp529Be1-ip3EC8P06Xarmz5ao

**Request Body:**

The following is an example of a request body for creating a property. You can refer to the preceding Resource tables for a list and descriptions of properties you can use to define your property. For instance, in this example, a pool called "Building 3" is being created with the values provided in the body.

```
{
  "name": "Building 3",
  "address": "",
  "description": "",
  "enforceMaxUnits": false,
  "maxUnits": 0,
  "allowSeparateGuestSecret": true,
  "managementName": "J. Smith",
  "managementPhone": "0005550100",
  "managementEmail": "js@smith.com",
  "tenantPortalHelpText": "",
  "tenantPortalAnnouncements": "",
  "links": [
    {
      "rel": "dpskPool",
      "href": "https://jeff245.cloudpath.net/admin/apiv2/yRCjJObWR6ER/dpskPools/AccountDpskPool-6ee78505-926d-433a-aead-1897e4e7ea9e"
    }
  ]
}
```

**Action:**

Use the **POST** action to send the request.

**Response Body:**

Once the request is sent, you will receive a "Status: 201 Created" if the POST is successful. You can see that a "guid" (a unique identifier for the newly created pool) is included in the response body.

```
{
  "guid": "Property-64c45bd0-bb03-4b81-a035-e42e10cb34c0",
  "name": "Building 3",
  "address": "",
  "description": "",
  "enforceMaxUnits": false,
  "maxUnits": 0,
}
```

```
"allowSeparateGuestSecret": true,
"ssids": [
  "SSID19",
  "SSID20"
],
"managementName": "J. Smith",
"managementPhone": "0005550100",
"managementEmail": "js@smith.com",
"tenantPortalHelpText": "",
"tenantPortalAnnouncements": "",
"links": [
  {
    "rel": "self",
    "href": "https://jeff245.cloudpath.net/admin/apiv2/yRCjJObWR6ER/properties/Property-64c45bd0-
bb03-4b81-a035-e42e10cb34c0",
    "hreflang": null,
    "media": null,
    "title": null,
    "type": null,
    "deprecation": null
  },
  {
    "rel": "uiConfiguration",
    "href": "https://jeff245.cloudpath.net/admin/apiv2/yRCjJObWR6ER/properties/Property-64c45bd0-
bb03-4b81-a035-e42e10cb34c0/uiConfiguration",
    "hreflang": null,
    "media": null,
    "title": null,
    "type": null,
    "deprecation": null
  },
  {
    "rel": "dpskPool",
    "href": "https://jeff245.cloudpath.net/admin/apiv2/yRCjJObWR6ER/dpskPools/
AccountDpskPool-6ee78505-926d-433a-aead-1897e4e7ea9e",
    "hreflang": null,
    "media": null,
    "title": null,
    "type": null,
    "deprecation": null
  },
  {
    "rel": "units",
    "href": "/apiv2/yRCjJObWR6ER/properties/Property-64c45bd0-bb03-4b81-a035-e42e10cb34c0/units",
    "hreflang": null,
    "media": null,
    "title": null,
    "type": null,
    "deprecation": null
  }
]
}
```

## Units

You can use REST API v2 calls to obtain information about existing units, to create or edit units, and to delete units.

The following table lists the properties that can be used in the body of a units-related request and/or are provided in the response body. (In the "Optional" column, if a default value is applicable, it is listed in angle brackets (< >).

**TABLE 61** Resource: Unit

Property Name	Type	Editable	Sort/Filter	Optional in Request/Response Body?	Description
guid	String	No	Yes	Does not need to be provided on a POST but needs to be provided in all other cases, and will always be returned.	The unique identifier for this unit.
number	String	Yes	Yes	No	The display name for this unit; must be unique.
description	String	Yes	Yes	yes	A description of the unit.
status	String <Enum>	Yes	Yes	Yes	The status of this unit -- SUSPENDED or ACTIVE. When suspended, both the DPSK and guest DPSK are revoked. An additional state of "TOKEN_RESET" is accepted on a PUT, and triggers the access token on the unit to be changed. An associated email and SMS message is sent to the contact for the unit.
apiHashSecret	String	No	No	Yes	The unique secret needed to access the tenant portal APIs. For more information, see <a href="#">Tenant Portal API Requirements</a> on page 123.
contact (embedded)	Contact <Object>	Yes	Neither	Yes	Contact information for this unit.
links	Link	No	No	Yes	Contains the following link as hrefs for use in other API calls: <ul style="list-style-type: none"> <li>• Self-referencing link</li> <li>• DPSK link</li> <li>• Guest DPSK link</li> <li>• Property link</li> <li>• Tenant portal link</li> <li>• Links to associated devices</li> </ul> <p><b>NOTE</b> If desired, you can go to the DPSKs to set overrides for the secret, guest secret, and vlans.</p>

**TABLE 62** Resource: Contact

Property Name	Type	Editable	Sort/Filter	Optional in Request/Response Body?	Description
contactName	String	Yes	Yes	No	The contact name for this unit.
phoneNumber	String	Yes	Yes	Yes	The phone number to use for contacts with this unit.
email	String <Email>	Yes	Yes	Yes	The email to use for contacts with this unit.
links	Link	Yes	No	Yes	Allows the user to define the smsCountryCode to use. If not provided, this defaults to the country code for the account.

## Units URIs and Actions

The following table indicates the URIs that you can append to the root URI, along with the actions you can take, and possible return codes you can receive.

**TABLE 63** Units URIs and Actions

URI	Action	Description	Return Codes
/properties/{prop_guid}/units	GET	Returns the list of units that are assigned to this property.	401 - Unauthorized 200 - OK
	POST	Creates a unit within the specified property. This action also creates DPSKs that are assigned to the unit. The DPSKs are assigned default secret(s). If desired, you can go to the DPSKs (by using the links returned in the Response body) to set overrides for the secret, guest secret, and vlans.	401 - Unauthorized 201 - Created
/properties/{prop_guid}/units/{guid}	GET	Returns details about the specified unit.	404 - Not found 401 - Unauthorized 200 - OK
	PUT	Updates details about the specified unit	409 - Conflict 404 - Not found 401 - Unauthorized 200 - OK
	DELETE	Removes the unit, the DPSKs associated with the unit, and all child devices associated with the DPSKs.	401 - Unauthorized 204 - No content 200 - OK

### Example of Using GET for Units

This example demonstrates how to obtain information about all units within one property.

**URI:**

This example uses the following URI:

```
https://Jeff245.cloudpath.net/admin/apiv2/yRCjObWR6ER/properties/Property-afaccdf8-5e39-41ce-9098-9747cc38aaa0/units
```

where:

- https://Jeff245.cloudpath.net/admin/apiv2 is the root URI of the Cloudpath system being used (must include https, as shown)
- yRCjObWR6ER is an example of an API key generated from the **Configuration > API Keys** section of the Cloudpath UI
- Property-afaccdf8-5e39-41ce-9098-9747cc38aaa0 is the GUID of the property that contains the units in question.

**Request Headers:**

The following table shows the required request headers for this URI example, with an example value of an active token that must be pasted into the Authorization header value:

**TABLE 64** Request Headers

Key	Value
Content-type	application/json



**TABLE 64** Request Headers (continued)

Key	Value
Authorization	eyJhbGciOiJIUzI1NiJ9.eyJzdWwiOiJqZWZmLnJob2RpZUBjb21tc2NvcGUuY29tliwicm9sZVBrJoiMjEwMDAiLCJhY2NvdW50QWRtaW5QayI6IjIiLCJhcGILZXRkiOiJaV2NjTGpQZUdZMGUilCjYXQjOjE1NzU1NzUxNTcsmV4cCl6MTU3NTU3NTQ1N30.2q4KTyDUevkAAz7mJyp529Be1-ip3EC8P06Xarmz5ao

**Request Body:**

None required.

**Action:**

Use the **GET** action to send the request.

**Response Body:**

Once the request is sent, you will receive a "Status: 200 OK" if the GET is successful. The response body provides information about all existing units in the property that was specified.

```
{
  "page": {
    "page": 1,
    "pageSize": 4,
    "totalCount": 4
  },
  "contents": [
    {
      "guid": "Unit-f59f2c93-6786-4d8e-adad-2e44d33df399",
      "number": "Apartment 1",
      "description": "",
      "status": "ACTIVE",
      "apiHashSecret": "CPNENCv2:BC|E30EECAF-AEFE-41F5-BBF9-5D3D450155AB|1JCWKjdHjnJH61wwHS/
VOA==:oXgm2xCUIPuD8yFKYZnNDQ==",
      "contact": {
        "contactName": "Andy Jones",
        "phoneNumber": "000-555-0101",
        "email": "aj@jones.com",
        "links": [
          {
            "rel": "smsCountryCode",
            "href": "https://jeff245.cloudpath.net/admin/apiv2/yRCjJObWR6ER/system/
smsCountryCodes/12310",
            "hreflang": null,
            "media": null,
            "title": null,
            "type": null,
            "deprecation": null
          }
        ]
      },
      "links": [
        {
          "rel": "property",
          "href": "https://jeff245.cloudpath.net/admin/apiv2/yRCjJObWR6ER/properties/Property-
afaccd8-5e39-41ce-9098-9747cc38aaa0",
          "hreflang": null,
          "media": null,
          "title": null,
          "type": null,
          "deprecation": null
        },
        {
          "rel": "self",
          "href": "https://jeff245.cloudpath.net/admin/apiv2/yRCjJObWR6ER/properties/Property-
afaccd8-5e39-41ce-9098-9747cc38aaa0/units/Unit-f59f2c93-6786-4d8e-adad-2e44d33df399",
          "hreflang": null,
          "media": null,
          "title": null,

```

```

        "type": null,
        "deprecation": null
    },
    {
        "rel": "dpsk",
        "href": "https://jeff245.cloudpath.net/admin/apiv2/yRCjJObWR6ER/dpskPools/AccountDpskPool-6ee78505-926d-433a-aead-1897e4e7ea9e/dpsks/AccountDpsk-eaf6936c-d652-4104-8166-1268047d9e35",
        "hreflang": null,
        "media": null,
        "title": null,
        "type": null,
        "deprecation": null
    },
    {
        "rel": "guestDpsk",
        "href": "https://jeff245.cloudpath.net/admin/apiv2/yRCjJObWR6ER/dpskPools/AccountDpskPool-6ee78505-926d-433a-aead-1897e4e7ea9e/dpsks/AccountDpsk-7368a879-82ec-4721-acd6-0339fff448f4a",
        "hreflang": null,
        "media": null,
        "title": null,
        "type": null,
        "deprecation": null
    },
    {
        "rel": "tenantPortal",
        "href": "https://jeff245.cloudpath.net/tenant?&auth=CPNENCv2%3ABC%7C5FF3EF78-0925-4FE3-B208-E47BAA4C15E7%7CMbLKoh7goJRVFiJOiL%2FjsQ%3D%3D%3ACEBx3DL0nwbnsZtQn57VqA%3D%3D&property=Property-afaccdf8-5e39-41ce-9098-9747cc38aaa0&api=yRCjJObWR6ER",
        "hreflang": null,
        "media": null,
        "title": null,
        "type": null,
        "deprecation": null
    }
]
},
{
    "guid": "Unit-106e2a83-cd28-4e06-8d01-1fd6433f2d25",
    "number": "Apartment 2",
    "description": "",
    "status": "ACTIVE",
    "apiHashSecret": "CPNENCv2:BC|63354EC5-480A-461B-ADAB-E7A3C3DE1D9D|xcoNsgDBfSY0z4c7mnSBzQ==:
+zyhD5AEV6xcZ9gwexW0w==",
    "contact": {
        "contactName": "Joe Johnson",
        "phoneNumber": "000-555-0102",
        "email": "jj@johnson.com",
        "links": [
            {
                "rel": "smsCountryCode",
                "href": "https://jeff245.cloudpath.net/admin/apiv2/yRCjJObWR6ER/system/smsCountryCodes/12310",
                "hreflang": null,
                "media": null,
                "title": null,
                "type": null,
                "deprecation": null
            }
        ]
    },
    "links": [
        {
            "rel": "property",
            "href": "https://jeff245.cloudpath.net/admin/apiv2/yRCjJObWR6ER/properties/Property-afaccdf8-5e39-41ce-9098-9747cc38aaa0",
            "hreflang": null,
            "media": null,
            "title": null,
            "type": null,
            "deprecation": null
        }
    ]
}

```

```

    },
    {
      "rel": "self",
      "href": "https://jeff245.cloudpath.net/admin/apiv2/yRCjJObWR6ER/properties/Property-afaccdf8-5e39-41ce-9098-9747cc38aaa0/units/Unit-106e2a83-cd28-4e06-8d01-1fd6433f2d25",
      "hreflang": null,
      "media": null,
      "title": null,
      "type": null,
      "deprecation": null
    },
    {
      "rel": "dpsk",
      "href": "https://jeff245.cloudpath.net/admin/apiv2/yRCjJObWR6ER/dpskPools/AccountDpskPool-6ee78505-926d-433a-aead-1897e4e7ea9e/dpsks/AccountDpsk-8fa23e84-1e45-4f34-add6-91f2e0afaa60",
      "hreflang": null,
      "media": null,
      "title": null,
      "type": null,
      "deprecation": null
    },
    {
      "rel": "guestDpsk",
      "href": "https://jeff245.cloudpath.net/admin/apiv2/yRCjJObWR6ER/dpskPools/AccountDpskPool-6ee78505-926d-433a-aead-1897e4e7ea9e/dpsks/AccountDpsk-08c2530b-c2fd-400d-bdec-201573cbdb69",
      "hreflang": null,
      "media": null,
      "title": null,
      "type": null,
      "deprecation": null
    },
    {
      "rel": "tenantPortal",
      "href": "https://jeff245.cloudpath.net/tenant?&auth=CPNENCv2%3ABC%7CD69CDBB0-4B13-41D7-9657-B726B4D98984%7CCruO1gDfnf5A4H8MGwJRpQ%3D%3D%3A2ygKET%2B1R69PZnOi%2BykJ1g%3D%3D&property=Property-afaccdf8-5e39-41ce-9098-9747cc38aaa0&api=yRCjJObWR6ER",
      "hreflang": null,
      "media": null,
      "title": null,
      "type": null,
      "deprecation": null
    }
  ]
},
{
  "guid": "Unit-fdfc0c58-1f14-4c64-ba6b-682e4478a89f",
  "number": "Apartment 3",
  "description": "",
  "status": "ACTIVE",
  "apiHashSecret": "CPNENCv2:BC|EDC63734-C57E-425E-A85E-EFFC3BB67536|F6tewpcmlh2NiZxUcmGo5g==:yVJeg3goCJ9FdzVy6EPNWw==",
  "contact": {
    "contactName": "Jennifer Wilson",
    "phoneNumber": "000-555-0103",
    "email": "jw@wilson.com",
    "links": [
      {
        "rel": "smsCountryCode",
        "href": "https://jeff245.cloudpath.net/admin/apiv2/yRCjJObWR6ER/system/smsCountryCodes/12310",
        "hreflang": null,
        "media": null,
        "title": null,
        "type": null,
        "deprecation": null
      }
    ]
  },
  "links": [
    {

```

```

        "rel": "property",
        "href": "https://jeff245.cloudpath.net/admin/apiv2/yRCjJObWR6ER/properties/Property-afaccdf8-5e39-41ce-9098-9747cc38aaa0",
        "hreflang": null,
        "media": null,
        "title": null,
        "type": null,
        "deprecation": null
    },
    {
        "rel": "self",
        "href": "https://jeff245.cloudpath.net/admin/apiv2/yRCjJObWR6ER/properties/Property-afaccdf8-5e39-41ce-9098-9747cc38aaa0/units/Unit-fdfc0c58-1f14-4c64-ba6b-682e4478a89f",
        "hreflang": null,
        "media": null,
        "title": null,
        "type": null,
        "deprecation": null
    },
    {
        "rel": "dpsk",
        "href": "https://jeff245.cloudpath.net/admin/apiv2/yRCjJObWR6ER/dpskPools/AccountDpskPool-6ee78505-926d-433a-aead-1897e4e7ea9e/dpsks/AccountDpsk-829d473f-4bda-42d6-8bab-df8eee377e45",
        "hreflang": null,
        "media": null,
        "title": null,
        "type": null,
        "deprecation": null
    },
    {
        "rel": "guestDpsk",
        "href": "https://jeff245.cloudpath.net/admin/apiv2/yRCjJObWR6ER/dpskPools/AccountDpskPool-6ee78505-926d-433a-aead-1897e4e7ea9e/dpsks/AccountDpsk-3abd4d92-e313-4b7c-b4c8-9c57ed8afdee",
        "hreflang": null,
        "media": null,
        "title": null,
        "type": null,
        "deprecation": null
    },
    {
        "rel": "tenantPortal",
        "href": "https://jeff245.cloudpath.net/tenant?&auth=CPNENCv2%3ABC%7C15068133-9372-478C-AA05-DC8B7984F2C4%7CGSFLgi5mkx1D2dCpz8XWA%3D%3D%3AhpYyejUCwIYstNeiwbJiCQ%3D%3D&property=Property-afaccdf8-5e39-41ce-9098-9747cc38aaa0&api=yRCjJObWR6ER",
        "hreflang": null,
        "media": null,
        "title": null,
        "type": null,
        "deprecation": null
    }
    ]
},
{
    "guid": "Unit-aac65b4a-0392-444b-9c8c-e389fdaa2000",
    "number": "Apartment 4",
    "description": "",
    "status": "ACTIVE",
    "apiHashSecret": "CPNENCv2:BC|FD2DCC84-4293-4B0B-974E-7AEF2B080F15|07Dtrylprim56jdDnCoDuw==:mvL3nahs2S9B/U4vL4izQQ==",
    "contact": {
        "contactName": "Kim Washington",
        "phoneNumber": "000-555-0104",
        "email": "kw@washington.com",
        "links": [
            {
                "rel": "smsCountryCode",
                "href": "https://jeff245.cloudpath.net/admin/apiv2/yRCjJObWR6ER/system/smsCountryCodes/12310",
                "hreflang": null,
                "media": null,
            }
        ]
    }
}

```

```

        "title": null,
        "type": null,
        "deprecation": null
    }
  ]
},
"links": [
  {
    "rel": "property",
    "href": "https://jeff245.cloudpath.net/admin/apiv2/yRCjJObWR6ER/properties/Property-afaccdf8-5e39-41ce-9098-9747cc38aaa0",
    "hreflang": null,
    "media": null,
    "title": null,
    "type": null,
    "deprecation": null
  },
  {
    "rel": "self",
    "href": "https://jeff245.cloudpath.net/admin/apiv2/yRCjJObWR6ER/properties/Property-afaccdf8-5e39-41ce-9098-9747cc38aaa0/units/Unit-aac65b4a-0392-444b-9c8c-e389fdaa2000",
    "hreflang": null,
    "media": null,
    "title": null,
    "type": null,
    "deprecation": null
  },
  {
    "rel": "dpsk",
    "href": "https://jeff245.cloudpath.net/admin/apiv2/yRCjJObWR6ER/dpskPools/AccountDpskPool-6ee78505-926d-433a-aead-1897e4e7ea9e/dpsks/AccountDpsk-12669a53-af00-49c8-991e-3776f3ca3081",
    "hreflang": null,
    "media": null,
    "title": null,
    "type": null,
    "deprecation": null
  },
  {
    "rel": "guestDpsk",
    "href": "https://jeff245.cloudpath.net/admin/apiv2/yRCjJObWR6ER/dpskPools/AccountDpskPool-6ee78505-926d-433a-aead-1897e4e7ea9e/dpsks/AccountDpsk-6dd540f4-ef42-487a-888a-55e096d56fe0",
    "hreflang": null,
    "media": null,
    "title": null,
    "type": null,
    "deprecation": null
  },
  {
    "rel": "tenantPortal",
    "href": "https://jeff245.cloudpath.net/tenant?&auth=CPNENCv2%3ABC%7C18DEABD7-0212-4AD0-9DA3-465B050BE542%7CS1vxaZVyEWUNkpir%2ByIXHw%3D%3D%3A7AgVOBGU8%2BIy03FY8ZRAGg%3D%3D&property=Property-afaccdf8-5e39-41ce-9098-9747cc38aaa0&api=yRCjJObWR6ER",
    "hreflang": null,
    "media": null,
    "title": null,
    "type": null,
    "deprecation": null
  }
]
}
]
}

```

## Registration Lists

You can use REST API v2 calls to obtain information about existing registration lists

The following table lists the properties that can be used in the body of a registration lists-related request and/or are provided in the response body. (In the "Optional" column, if a default value is applicable, it is listed in angle brackets (< >)).

**TABLE 65** Resource: RegistrationList

Property Name	Type	Editable	Filter/Sort	Optional in Request/Response Body?	Description
guid	String	No	Neither	Optional on create only, but not on any subsequent uses	The unique identifier for this list.
name	String	No	Neither	No	The unique reference name for the list.
description	String	No	Neither	Yes	A description for this list.
sequence	Integer	No	filter and orderBy (like only)	No	The sequence of the list, which determines the order in which a MAC registration gets evaluated by RADIUS. A MAC Registration list with a lower number is checked before one with a higher number.
ssidRegex	String	No	Neither	Yes	A regex to determine which SSIDs can access this registration list.
expirationDateRule	<Object>	No	Neither	Yes	The object containing the attributes that describe the registration validity date. See the "Resource: expirationDateRule" table below.
behavior	String <Enum>	No	Neither	Yes	An enum describing the behavior of the plugin. Possible options are: <ul style="list-style-type: none"> <li>PROMPT_WHEN_NO_MAC</li> <li>ALWAYS_PROMPT</li> <li>REDIRECT_WHEN_NO_MAC</li> <li>ALWAYS_REDIRECT</li> <li>DO_NOTHING_WHEN_NO_MAC</li> </ul>
redirectInfo	Object	No	Neither	default <null>	If the "behavior" property is either REDIRECT_WHEN_NO_MAC or ALWAYS_REDIRECT, then this object provides the additional details for the redirect. See the "Resource: redirectInfo" table below.
promptInfo	Object	No	Neither	default <null>	If the "behavior" property is either PROMPT_WHEN_NO_MAC or ALWAYS_PROMPT, then this object provides the additional details for the prompt. See the "Resource: promptInfo" table below.
autoCleanup	boolean	No	Neither	default <false>	A boolean value that determines if MAC registrations that are 24 hours past the expirationDateRule will be automatically removed from the list.
link	Link	No	No	Yes	This includes the following two href links: <ul style="list-style-type: none"> <li>self: a self-referencing link</li> <li>A linked list of child macRegistrations</li> </ul>

**TABLE 66** Resource: redirectInfo

Property Name	Type	Editable	Filter/Sort	Optional in Request/Response Body?	Description
redirectUrl	String	No	Neither	Yes	The URL where the user is redirected.
usePost	Boolean	No	Neither	Yes (default is false)	If the value is set to true, a POST will be used for the redirect; if the value is set to false, a GET will be used.
postParameters	List <string>	No	Neither	Yes	If the value of the "usePost" property is true, this contains a list of string POST parameters that are supplied with the redirect request. The parameters are provided in the format: key=value
allowContinuation	Boolean	No	Neither	Yes (default is true)	If true, the submit-redirect call is processed; if false, the submit-redirect call is ignored.
killSession	Boolean	No	Neither	Yes (default is false)	If true, the user's session ends and they are redirected. If they return, they are forced to start over.

**TABLE 67** Resource: promptInfo

Property Name	Type	Editable	Filter/Sort	Optional in Request/Response Body?	Description
title	String	No	Neither	Yes	The title of the prompt content.
promptText	String	No	Neither	Yes	The message that appears in the prompt.
macAddressLabel	String	No	Neither	Yes	The label next to the MAC address text box.
helpLinkCaption	String	No	Neither	Yes	The text used as the help link.
helpLinkUrl	String	No	Neither	Yes	The URL for the help link.
continueButtonLabel	String	No	Neither	Yes	The label displayed on the Continue button.
invalidMacErrorMessage	String	No	Neither	Yes	The error message displayed to the user if the MAC address is not properly formatted.

**TABLE 68** Resource: expirationDateRule

Property Name	Type	Editable	Filter/Sort	Optional in Request/Response Body?	Description
type	String <Enum>	No	Neither	Yes	The type of expiration date rule. The full expiration date rule is determined by paring the type with either an offset or date. Possible options are: <ul style="list-style-type: none"> <li>• SPECIFIED_DATE</li> <li>• MINUTES_AFTER_TIME</li> <li>• HOURS_AFTER_TIME</li> <li>• DAYS_AFTER_TIME</li> <li>• WEEKS_AFTER_TIME</li> <li>• MONTHS_AFTER_TIME</li> <li>• QUARTERS_AFTER_TIME</li> <li>• YEARS_AFTER_TIME</li> <li>• END_OF_HOUR</li> <li>• END_OF_DAY</li> <li>• END_OF_WEEK</li> <li>• END_OF_MONTH</li> <li>• END_OF_QUARTER</li> <li>• END_OF_HALF</li> <li>• END_OF_YEAR</li> </ul>
date	String <date>	No	Neither	Yes	If the "type" property is SPECIFIED_DATE, then this field is the related date in the format of: YYYY-MM-DD
offSet	integer	No	Neither	Yes	If the "type" property is not SPECIFIED_DATE, then this field is the offset amount

## Registration Lists URIs and Actions

The following table indicates the URIs that you can append to the root URI, along with the actions you can take, and possible return codes you can receive.

**TABLE 69** Registration Lists URIs and Actions

URI	Action	Description	Return Codes
/registrationLists/	GET	Returns all MAC registration lists.	401 - Unauthorized 200 - OK
/registrationLists/{listGuid}	GET	Returns a specific MAC registration list.	404 - Not Found 401 - Unauthorized 200 - OK

## Example of Using GET to Obtain All Registration Lists

This example demonstrates how to obtain all registration lists in your Cloudpath system by using the REST API GET call.

### URI:

This example uses the following URI:

```
https://Jeff243.cloudpath.net/admin/apiv2/5XcTc6SjkHDL/registrationLists
```



where:

- <https://Jeff243.cloudpath.net/admin/apiv2> is the root URI of the Cloudpath system being used (must include https, as shown)
- 5XcTc6SjkHDL is an example of an API key generated from the **Configuration > API Keys** section of the Cloudpath UI

**Request Headers:**

The following table shows the required request headers for this URI example, with an example value of an active token that must be pasted into the Authorization header value:

**TABLE 70** Request Headers

Key	Value
Content-type	application/json
Authorization	eyJhbGciOiJIUzI1NiJ9.eyJzdWiiOiJqZWZmLnJob2RpZUBjb21tc2NvcGUuY29tIiwicm9sZVBrIjo1MjEwMDAiLCJhY2NvdW50QWRtaW5QayI6IjIiLCJhcGILXkiOiJaV2NjTGpQZUdZMGUuIiwiYXQiOiJlNzU1NzUxNTcsmV4cCl6MTU3NTU3NTQ1N30.2q4KTyDUevkAAz7mJyp529Be1-ip3EC8P06Xarmz5ao

**Request Body:**

No request body is needed.

**Action:**

Use the **GET** action to send the request.

**Response Body:**

Once the request is sent, you will receive a "Status: 200 OK" if the GET is successful.

```
{
  "page": {
    "page": 1,
    "pageSize": 2,
    "totalCount": 2
  },
  "contents": [
    {
      "guid": "WorkflowRegistration-2de79119-f1da-4b7e-84b8-b0482911cael",
      "name": "Mac reg 12",
      "description": "",
      "sequence": 1,
      "ssidRegex": "ssid12",
      "expirationDateRule": {
        "type": "DAYS_AFTER_TIME",
        "offset": 1
      },
      "behavior": "ALWAYS_REDIRECT",
      "redirectInfo": {
        "redirectUrl": "https://wlan.cloudpath.net",
        "usePost": true,
        "postParameters": [
          "username=bob"
        ],
        "allowContinuation": true,
        "killSession": false
      },
      "autoCleanup": false,
      "links": [
        {
          "rel": "self",
          "href": "https://jeff243.cloudpath.net/admin/apiv2/5XcTc6SjkHDL/registrationLists/WorkflowRegistration-2de79119-f1da-4b7e-84b8-b0482911cael",
          "hreflang": null,
          "media": null,
          "title": null,
          "type": null,

```

```
        "deprecation": null
      },
      {
        "rel": "macRegistrations",
        "href": "https://jeff243.cloudpath.net/admin/apiv2/5XcTc6SjkHDL/registrationLists/WorkflowRegistration-2de79119-f1da-4b7e-84b8-b0482911cael/macRegistrations?page=1&pageSize=10{&filter,orderBy}",
        "hreflang": null,
        "media": null,
        "title": null,
        "type": null,
        "deprecation": null
      }
    ]
  },
  {
    "guid": "WorkflowRegistration-3802eb98-7c97-4949-80b4-6ec9901e1a4a",
    "name": "Mac reg 13",
    "description": "",
    "sequence": 2,
    "ssidRegex": "ssid13",
    "expirationDateRule": {
      "type": "DAYS_AFTER_TIME",
      "offset": 1
    },
    "behavior": "ALWAYS_REDIRECT",
    "redirectInfo": {
      "redirectUrl": "https://cloudpath.com.net",
      "usePost": false,
      "allowContinuation": true,
      "killSession": false
    },
    "autoCleanup": false,
    "links": [
      {
        "rel": "self",
        "href": "https://jeff243.cloudpath.net/admin/apiv2/5XcTc6SjkHDL/registrationLists/WorkflowRegistration-3802eb98-7c97-4949-80b4-6ec9901e1a4a",
        "hreflang": null,
        "media": null,
        "title": null,
        "type": null,
        "deprecation": null
      },
      {
        "rel": "macRegistrations",
        "href": "https://jeff243.cloudpath.net/admin/apiv2/5XcTc6SjkHDL/registrationLists/WorkflowRegistration-3802eb98-7c97-4949-80b4-6ec9901e1a4a/macRegistrations?page=1&pageSize=10{&filter,orderBy}",
        "hreflang": null,
        "media": null,
        "title": null,
        "type": null,
        "deprecation": null
      }
    ]
  }
]
```

## MAC Registrations

You can use REST API v2 calls to obtain information about existing MAC-registration lists and specific MAC registrations as well as to add a registration.

The following table lists the properties that can be used in the body of a MAC-registration request and/or are provided in the response body. (In the "Optional" column, if a default value is applicable, it is listed in angle brackets (< >)).

**TABLE 71** Resource: MacRegistration

Property Name	Type	Editable	Filter/Sort	Optional in Request/Response Body?	Description
guid	String	No	Neither	Optional on create only, but not on any subsequent uses	The unique identifier for this MAC registration.
macAddress	String	No	sortBy, like	No	The MAC address for this registration. Must be provided on a POST, and may not be changed.
status	Enum	Yes	sortBy, eq, in	No	Status of the registration, either ACTIVE, REVOKED or EXPIRED. If not provided, the status defaults to "Active". The status can only be set to REVOKED or ACTIVE. EXPIRED is dependent on the expired date of this registration.
username	String	No	sortBy, like	Yes	A username for this device; it does not reflect an authenticated user that has gone through an actual authentication process.
email	String	No	sortBy, like	Yes	The email address to associate with this device.
location	String	No	sortBy, like	Yes	Location of the device.
deviceName	String	No	sortBy, like	Yes	The device name assigned to this registration .
expirationDate	String <date>	Yes	sortBy, like	Yes	The ISO 8601 date time that indicates when this registration expires. If not provided in the request body of a POST, this value defaults to 24 hours from the creation of this registration.
lastSeenDate	String <date>	No	sortBy, like	Yes	The ISO 8601 date time that this MAC address was authenticated in Cloudpath. Will be ignored on POST but will always be returned.
revokeInfo	RevokeInfo	Yes	See the "Resource: revokeInfo" table below.	Yes if the status is changed to REVOKED.	Information about a revoke. A "Conflict" will occur if this property is not provided on a PUT/POST with a status of REVOKED.
links	Links [] <array>	No	No	Yes	This includes the following href links that can be used in other API calls: <ul style="list-style-type: none"> <li>self: links for each registration within the registration list</li> <li>parent: link to the registration list</li> </ul>

**TABLE 72** Resource: revokeInfo

Property Name	Type	Editable	Filter/Sort	Optional in Request/Response Body?	Description
date	String <date>	Yes	sortBy, like	No	The ISO 8601 date time that this registration was revoked.
reason	String	No	sortBy, like	No	The reason that the registration was revoked.
status	Enum	Yes	sortBy, like	No	Status of the registration, either ACTIVE, REVOKED or EXPIRED. If not provided, the status defaults to "Active". The status can only be set to REVOKED or ACTIVE. EXPIRED is dependent on the expired date of this registration.

## MAC Registration URIs and Actions

The following table indicates the URIs that you can append to the root URI, along with the actions you can take, and possible return codes you can receive.

**TABLE 73** MAC Registration URIs and Actions

URI	Action	Description	Return Codes
/registrationLists/{listGuid}/macRegistrations	GET	Returns the set of registrations assigned to this list.	401 - Unauthorized 200 - OK 404 - Not found
	POST	Adds a registration to this list. If the MAC address provided already exists, a new MAC registration will be created and the existing one will be revoked.	422 - Unprocessable Entity (invalid format) 404 - Not found 401 - Unauthorized 201 - Created
/registrationLists/{listGuid}/macRegistrations/{guid}	GET	Returns the specified registration that belongs to this list.	404 - Not Found 401 - Unauthorized 200 - OK
	PUT	Changes the properties in the specified MAC registration. You may change the status to ACTIVE or REVOKED, but EXPIRED is based on the expiration date. If REVOKED is requested, but no RevokeInfo is provided, a "422, Unprocessable Entity" response code is returned.	422 - Unprocessable entity 404 - Not found 401 - Unauthorized 200 - OK

## Example of Using GET to Obtain Information About a Specific MAC-Registration List

This example demonstrates how to obtain information about a specific MAC-registration list in your Cloudpath system by using the REST API GET call.

**URI:**

This example uses the following URI:

```
https://Jeff243.cloudpath.net/admin/apiv2/5XcTc6SjkHDL/registrationLists/WorkflowRegistration-2de79119-f1da-4b7e-84b8-b0482911cae1/macRegistrations
```

where:

- https://Jeff243.cloudpath.net/admin/apiv2 is the root URI of the Cloudpath system being used (must include https, as shown)
- 5XcTc6SjkHDL is an example of an API key generated from the **Configuration > API Keys** section of the Cloudpath UI
- WorkflowRegistration-2de79119-f1da-4b7e-84b8-b0482911cae1 is the GUID of the MAC registration list. This GUID can be found by doing a GET request on all the registration lists in the Cloudpath system. For more information, refer to [Table 69](#) on page 88.

**Request Headers:**

The following table shows the required request headers for this URI example, with an example value of an active token that must be pasted into the Authorization header value:

**TABLE 74** Request Headers

Key	Value
Content-type	application/json
Authorization	eyJhbGciOiJIUzI1NiJ9.eyJzdWiiOiJqZWZmLnJob2RpZUBjb21tc2NvcGUuY29tliwicm9sZVBrIjoieWMDAiLCJhY2NvdW50QWRtaW5QayI6IjliLCJhcGILZXkiOiJhV2NjTGpQZUdZMGUilCJpYXQiOiJlNzU1NzUxNTcslmV4cCI6MTU3NTU3NTQ1N30.2q4KTyDUevkAAz7mJyp529Be1-ip3EC8P06Xarmz5ao

**Request Body:**

No request body is required.

**Action:**

Use the **GET** action to send the request.

**Response Body:**

Once the request is sent, you will receive a "Status: 200 OK" if the GET is successful.

```
{
  "page": {
    "page": 1,
    "pageSize": 3,
    "totalCount": 3
  },
  "contents": [
    {
      "guid": "5",
      "macAddress": "AB:BC:DD:EE:FF:DC",
      "status": "ACTIVE",
      "username": "",
      "deviceName": "",
      "location": "",
      "email": "",
      "expirationDate": "2020-07-28T22:07:52Z",
      "links": [
        {
          "rel": "self",
          "href": "https://jeff243.cloudpath.net/admin/apiv2/5XcTc6SjkHDL/registrationLists/WorkflowRegistration-2de79119-f1da-4b7e-84b8-b0482911cael/macRegistrations/5",
          "hreflang": null,
          "media": null,
          "title": null,
          "type": null,
          "deprecation": null
        },
        {
          "rel": "parent",
          "href": "https://jeff243.cloudpath.net/admin/apiv2/5XcTc6SjkHDL/registrationLists/WorkflowRegistration-2de79119-f1da-4b7e-84b8-b0482911cael",
          "hreflang": null,
          "media": null,
          "title": null,
          "type": null,
          "deprecation": null
        }
      ]
    },
    {
      "guid": "2",
      "macAddress": "AA:BB:CC:DD:EE:FF",
      "status": "REVOKED",
      "username": "",
      "deviceName": "",
      "location": "",
      "email": "",
      "expirationDate": "2020-07-28T22:05:39Z",
      "revokeInfo": {

```

```
    "date": "2020-07-27T22:06:54Z",
    "reason": "Updated MAC registration for same MAC address was imported",
    "user": null
  },
  "links": [
    {
      "rel": "self",
      "href": "https://jeff243.cloudpath.net/admin/apiv2/5XcTc6SjkHDL/registrationLists/WorkflowRegistration-2de79119-f1da-4b7e-84b8-b0482911cael/macRegistrations/2",
      "hreflang": null,
      "media": null,
      "title": null,
      "type": null,
      "deprecation": null
    },
    {
      "rel": "parent",
      "href": "https://jeff243.cloudpath.net/admin/apiv2/5XcTc6SjkHDL/registrationLists/WorkflowRegistration-2de79119-f1da-4b7e-84b8-b0482911cael",
      "hreflang": null,
      "media": null,
      "title": null,
      "type": null,
      "deprecation": null
    }
  ]
},
{
  "guid": "1",
  "macAddress": "AA:BB:CC:DD:EE:FF",
  "status": "REVOKED",
  "username": "",
  "deviceName": "",
  "location": "",
  "email": "",
  "expirationDate": "2020-07-28T21:33:06Z",
  "revokeInfo": {
    "date": "2020-07-27T22:05:46Z",
    "reason": "Updated MAC registration for same MAC address was imported",
    "user": null
  },
  "links": [
    {
      "rel": "self",
      "href": "https://jeff243.cloudpath.net/admin/apiv2/5XcTc6SjkHDL/registrationLists/WorkflowRegistration-2de79119-f1da-4b7e-84b8-b0482911cael/macRegistrations/1",
      "hreflang": null,
      "media": null,
      "title": null,
      "type": null,
      "deprecation": null
    },
    {
      "rel": "parent",
      "href": "https://jeff243.cloudpath.net/admin/apiv2/5XcTc6SjkHDL/registrationLists/WorkflowRegistration-2de79119-f1da-4b7e-84b8-b0482911cael",
      "hreflang": null,
      "media": null,
      "title": null,
      "type": null,
      "deprecation": null
    }
  ]
}
]
```

# Enrollment Resources and URIs

## Enrollments

You can use REST API v2 calls to obtain information about existing enrollments or to edit enrollments.

The following table lists the properties that can be used in the body of an enrollment-related request and/or are provided in the response body. (In the "Optional" column, if a default value is applicable, it is listed in angle brackets (< >).)

**TABLE 75** Resource: Enrollment

Property Name	Type	Editable	Sort/Filter	Optional in Request/Response Body?	Description
guid	String	No	sortBy, like	No	The unique identifier for this enrollment..
status	enum <String>	Yes	sortBy, in eq	No	Shows the status of this enrollment. The only enrollment that can be BLOCKED is an ACTIVE enrollment. If you unblock an enrollment, it can only return to ACTIVE status.  Changing an active enrollment to BLOCKED revokes the enrollment. All other status changes are ignored. The status will be one of the following: <ul style="list-style-type: none"> <li>INITIATED - Enrollment has been started,</li> <li>SUBMITTED - Enrollment is proceeding through the wizard.</li> <li>APPROVED - The user or device has met the requirements.</li> <li>REJECTED - The user or device failed to meet the workflow requirements.</li> <li>ACTIVE - The enrollment has completed and was issued a certificate, PEAP, or DPSK.</li> <li>BLOCKED - The enrollment has been BLOCKED.</li> <li>ABANDONED - Certificate was never picked up.</li> <li>EXPIRED - The user/device has expired.</li> <li>COMPLETED_BEFORE_AUTHORIZATION - Did not finish authorization but reached a dead end.</li> </ul>
createdDate	DateTime	No	sortBy	Yes	(ISO 8601) The date that this enrollment was initially created. Will be provided if the enrollment was blocked.
blockedReason	String	Yes	neither	Yes/No	Will be returned while the status is blocked.
blockedDate	DateTime	No	neither	Yes	(ISO 8601) The date that this enrollment was blocked. Will be provided if the enrollment was blocked.
ipAddress	String	No	sortBy, like	Yes	The IP address for the enrollment agent.
macAddress	String	No	sortBy, like	Yes	The MAC address associated with the enrollment.
name	String	No	sortBy, like	Yes	The name of the user.
email	String	No	sortBy, like	Yes	The email address of the user, as specified by the authentication server.
location	String	No	sortBy, like	Yes	The deployment location that was accessed.
operatingSystem	String	No	neither	Yes	The name of the operating system on the device.
browser	String	No	neither	Yes	The browser used during enrollment.
formFactor	String	No	neither	Yes	The type of device used in the enrolment.

**TABLE 75** Resource: Enrollment (continued)

Property Name	Type	Editable	Sort/Filter	Optional in Request/Response Body?	Description
expirationDate	DateTime	No	sortBy	Yes	(ISO 8601) The date that this enrollment expires.
voucherApprovalDate	DateTime	No	sortBy	Yes	(ISO 8601) The date that this enrollment was approved through a voucher. If this enrollment does not use a voucher, no date is provided.
outputType	Enum <String>	No	sortBy, like	No	The type of output from this enrollment: WIZARD_AND_CERTIFICATE, WIZARD_ONLY, CERTIFICATE_ONLY, or NONE
links		NO			Self-referencing link, and links for: user, device, certificate, dpsks, macRegistration, certificates, and variables.

### Enrollment URIs and Actions

The following table indicates the URIs that you can append to the root URI, along with the actions you can take, and possible return codes you can receive.

**TABLE 76** Enrollment URIs and Actions

URI	Action	Description	Return Codes
/enrollments	GET	Returns the list of enrollments in the system.	401 - Unauthorized 200 - Ok
/enrollments/{guid}	GET	Returns details about the specified enrollment.	404 - Not found 401 - Unauthorized 200 - Ok
	PUT	Only allows the following for this enrollment: <ul style="list-style-type: none"> <li>Changing an ACTIVE status to BLOCKED.</li> <li>Returning a BLOCKED status to ACTIVE.</li> </ul>	404 - Not found 401 - Unauthorized 200 - Ok
/enrollments/{guid}/dpsks	GET	Returns the list of DPSKS assigned during this enrollment process.  <b>NOTE</b> The self-referencing link points back to: /enrollments/{guid}/	404 - Not found 401 - Unauthorized 200 - Ok
/enrollments/{guid}/certificates	GET	Returns the list of certificates that were issued for the specified enrollment.	404 - Not found 401 - Unauthorized 200 - Ok

### Example of Using GET for Enrollments

This example demonstrates how to obtain information about all enrollments.

#### URI:

This example uses the following URI:

```
https://Jeff245.cloudpath.net/admin/apiv2/yRCjJObWR6ER/enrollments
```



where:

- <https://jeff245.cloudpath.net/admin/apiv2> is the root URI of the Cloudpath system being used (must include https, as shown)
- yRCjJObWR6ER is an example of an API key generated from the **Configuration > API Keys** section of the Cloudpath UI

**Request Headers:**

The following table shows the required request headers for this URI example, with an example value of an active token that must be pasted into the Authorization header value:

**TABLE 77** Request Headers

Key	Value
Content-type	application/json
Authorization	eyJhbGciOiJIUzI1NiJ9.eyJzdWIiOiJqZWZmLnJob2RpZUBjb21tc2NvcGUuY29tliwicm9sZVBrIjoieWMDAilCJhY2NvdW50QWRtaW5QayI6IjllLCJhcGILZXXkiOiJaV2NjTGpQZUdZMGUilCJpYXQiOjE1NzU1NzUxNjUxNTcsmV4cCl6MTU3NTU3NTQ1N30.2q4KTyDUevkAAz7mJyp529Be1-ip3EC8P06Xarmz5ao

**Request Body:**

None required.

**Action:**

Use the **GET** action to send the request.

**Response Body:**

Once the request is sent, you will receive a "Status: 200 OK" if the GET is successful. The response body provides information about all existing enrollments, including any abandoned ones (included in the example below).

```
{
  "page": {
    "page": 1,
    "pageSize": 5,
    "totalCount": 5
  },
  "contents": [
    {
      "guid": "Enrollment-4718fcaa-d04f-43c3-a3f0-6ef3af6b9d59",
      "status": "ACTIVE",
      "ipAddress": "10.45.245.129",
      "macAddress": "",
      "location": "",
      "operatingSystem": "Windows 10",
      "browser": "Chrome 8",
      "formFactor": "",
      "expirationDate": "2021-02-18T04:45:11Z",
      "voucherApprovalDate": "2021-02-18T04:15:11Z",
      "outputType": "NONE",
      "createdDate": "2021-02-18T04:15:05Z",
      "links": [
        {
          "rel": "self",
          "href": "https://jeff245.cloudpath.net/admin/apiv2/yRCjJObWR6ER/enrollments/Enrollment-4718fcaa-d04f-43c3-a3f0-6ef3af6b9d59",
          "hreflang": null,
          "media": null,
          "title": null,
          "type": null,
          "deprecation": null
        },
        {
          "rel": "device",
          "href": "https://jeff245.cloudpath.net/admin/apiv2/yRCjJObWR6ER/enrollments/Enrollment-4718fcaa-d04f-43c3-a3f0-6ef3af6b9d59/device",

```

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### Enrollment Resources and URIs

```
        "hreflang": null,
        "media": null,
        "title": null,
        "type": null,
        "deprecation": null
    },
    {
        "rel": "dpsks",
        "href": "https://jeff245.cloudpath.net/admin/apiv2/yRCjJObWR6ER/enrollments/
Enrollment-4718fcaa-d04f-43c3-a3f0-6ef3af6b9d59/dpsks",
        "hreflang": null,
        "media": null,
        "title": null,
        "type": null,
        "deprecation": null
    },
    {
        "rel": "macRegistrations",
        "href": "https://jeff245.cloudpath.net/admin/apiv2/yRCjJObWR6ER/enrollments/
Enrollment-4718fcaa-d04f-43c3-a3f0-6ef3af6b9d59/macRegistrations",
        "hreflang": null,
        "media": null,
        "title": null,
        "type": null,
        "deprecation": null
    },
    {
        "rel": "variables",
        "href": "https://jeff245.cloudpath.net/admin/apiv2/yRCjJObWR6ER/enrollments/
Enrollment-4718fcaa-d04f-43c3-a3f0-6ef3af6b9d59/variables",
        "hreflang": null,
        "media": null,
        "title": null,
        "type": null,
        "deprecation": null
    }
]
},
{
    "guid": "Enrollment-6178b32e-94c2-47ec-a9c4-5942b016cb19",
    "status": "ACTIVE",
    "ipAddress": "10.45.245.129",
    "macAddress": "",
    "location": "",
    "operatingSystem": "Windows 10",
    "browser": "Chrome 8",
    "formFactor": "",
    "expirationDate": "2021-02-18T04:45:02Z",
    "voucherApprovalDate": "2021-02-18T04:15:02Z",
    "outputType": "NONE",
    "createdDate": "2021-02-18T04:14:53Z",
    "links": [
        {
            "rel": "self",
            "href": "https://jeff245.cloudpath.net/admin/apiv2/yRCjJObWR6ER/enrollments/
Enrollment-6178b32e-94c2-47ec-a9c4-5942b016cb19",
            "hreflang": null,
            "media": null,
            "title": null,
            "type": null,
            "deprecation": null
        },
        {
            "rel": "device",
            "href": "https://jeff245.cloudpath.net/admin/apiv2/yRCjJObWR6ER/enrollments/
Enrollment-6178b32e-94c2-47ec-a9c4-5942b016cb19/device",
            "hreflang": null,
            "media": null,
            "title": null,
            "type": null,
            "deprecation": null
        }
    ],
}
```

```

    {
      "rel": "dpsks",
      "href": "https://jeff245.cloudpath.net/admin/apiv2/yRCjJObWR6ER/enrollments/
Enrollment-6178b32e-94c2-47ec-a9c4-5942b016cb19/dpsks",
      "hreflang": null,
      "media": null,
      "title": null,
      "type": null,
      "deprecation": null
    },
    {
      "rel": "macRegistrations",
      "href": "https://jeff245.cloudpath.net/admin/apiv2/yRCjJObWR6ER/enrollments/
Enrollment-6178b32e-94c2-47ec-a9c4-5942b016cb19/macRegistrations",
      "hreflang": null,
      "media": null,
      "title": null,
      "type": null,
      "deprecation": null
    },
    {
      "rel": "variables",
      "href": "https://jeff245.cloudpath.net/admin/apiv2/yRCjJObWR6ER/enrollments/
Enrollment-6178b32e-94c2-47ec-a9c4-5942b016cb19/variables",
      "hreflang": null,
      "media": null,
      "title": null,
      "type": null,
      "deprecation": null
    }
  ]
},
{
  "guid": "Enrollment-4ef63fa5-4429-40c0-a57e-43bb1eac1f65",
  "status": "ACTIVE",
  "ipAddress": "10.45.245.129",
  "macAddress": "",
  "location": "",
  "operatingSystem": "Windows 10",
  "browser": "Chrome 8",
  "formFactor": "",
  "expirationDate": "2021-02-18T04:44:45Z",
  "voucherApprovalDate": "2021-02-18T04:14:45Z",
  "outputType": "NONE",
  "createdDate": "2021-02-18T04:14:29Z",
  "links": [
    {
      "rel": "self",
      "href": "https://jeff245.cloudpath.net/admin/apiv2/yRCjJObWR6ER/enrollments/
Enrollment-4ef63fa5-4429-40c0-a57e-43bb1eac1f65",
      "hreflang": null,
      "media": null,
      "title": null,
      "type": null,
      "deprecation": null
    },
    {
      "rel": "device",
      "href": "https://jeff245.cloudpath.net/admin/apiv2/yRCjJObWR6ER/enrollments/
Enrollment-4ef63fa5-4429-40c0-a57e-43bb1eac1f65/device",
      "hreflang": null,
      "media": null,
      "title": null,
      "type": null,
      "deprecation": null
    },
    {
      "rel": "dpsks",
      "href": "https://jeff245.cloudpath.net/admin/apiv2/yRCjJObWR6ER/enrollments/
Enrollment-4ef63fa5-4429-40c0-a57e-43bb1eac1f65/dpsks",
      "hreflang": null,
      "media": null,

```

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```
        "title": null,
        "type": null,
        "deprecation": null
    },
    {
        "rel": "macRegistrations",
        "href": "https://jeff245.cloudpath.net/admin/apiv2/yRCjJObWR6ER/enrollments/
Enrollment-4ef63fa5-4429-40c0-a57e-43bb1eac1f65/macRegistrations",
        "hreflang": null,
        "media": null,
        "title": null,
        "type": null,
        "deprecation": null
    },
    {
        "rel": "variables",
        "href": "https://jeff245.cloudpath.net/admin/apiv2/yRCjJObWR6ER/enrollments/
Enrollment-4ef63fa5-4429-40c0-a57e-43bb1eac1f65/variables",
        "hreflang": null,
        "media": null,
        "title": null,
        "type": null,
        "deprecation": null
    }
]
},
{
    "guid": "Enrollment-73ca7a79-8f34-4735-b6e8-ac416580e417",
    "status": "ACTIVE",
    "ipAddress": "10.45.245.129",
    "macAddress": "",
    "location": "",
    "operatingSystem": "Windows 10",
    "browser": "Chrome 8",
    "formFactor": "",
    "expirationDate": "2021-02-18T04:41:34Z",
    "voucherApprovalDate": "2021-02-18T04:11:34Z",
    "outputType": "NONE",
    "createdDate": "2021-02-18T04:11:26Z",
    "links": [
        {
            "rel": "self",
            "href": "https://jeff245.cloudpath.net/admin/apiv2/yRCjJObWR6ER/enrollments/
Enrollment-73ca7a79-8f34-4735-b6e8-ac416580e417",
            "hreflang": null,
            "media": null,
            "title": null,
            "type": null,
            "deprecation": null
        },
        {
            "rel": "device",
            "href": "https://jeff245.cloudpath.net/admin/apiv2/yRCjJObWR6ER/enrollments/
Enrollment-73ca7a79-8f34-4735-b6e8-ac416580e417/device",
            "hreflang": null,
            "media": null,
            "title": null,
            "type": null,
            "deprecation": null
        },
        {
            "rel": "dpsks",
            "href": "https://jeff245.cloudpath.net/admin/apiv2/yRCjJObWR6ER/enrollments/
Enrollment-73ca7a79-8f34-4735-b6e8-ac416580e417/dpsks",
            "hreflang": null,
            "media": null,
            "title": null,
            "type": null,
            "deprecation": null
        },
        {
            "rel": "macRegistrations",
```

```

        "href": "https://jeff245.cloudpath.net/admin/apiv2/yRCjJObWR6ER/enrollments/
Enrollment-73ca7a79-8f34-4735-b6e8-ac416580e417/macRegistrations",
        "hreflang": null,
        "media": null,
        "title": null,
        "type": null,
        "deprecation": null
    },
    {
        "rel": "variables",
        "href": "https://jeff245.cloudpath.net/admin/apiv2/yRCjJObWR6ER/enrollments/
Enrollment-73ca7a79-8f34-4735-b6e8-ac416580e417/variables",
        "hreflang": null,
        "media": null,
        "title": null,
        "type": null,
        "deprecation": null
    }
]
},
{
    "guid": "Enrollment-7084b41a-ed46-48bd-97fb-3b5247f637b0",
    "status": "ABANDONED",
    "ipAddress": "10.45.245.129",
    "macAddress": "",
    "location": "",
    "operatingSystem": "Windows 10",
    "browser": "Chrome 8",
    "formFactor": "",
    "outputType": "NONE",
    "createdDate": "2021-02-18T04:06:44Z",
    "links": [
        {
            "rel": "self",
            "href": "https://jeff245.cloudpath.net/admin/apiv2/yRCjJObWR6ER/enrollments/
Enrollment-7084b41a-ed46-48bd-97fb-3b5247f637b0",
            "hreflang": null,
            "media": null,
            "title": null,
            "type": null,
            "deprecation": null
        },
        {
            "rel": "device",
            "href": "https://jeff245.cloudpath.net/admin/apiv2/yRCjJObWR6ER/enrollments/
Enrollment-7084b41a-ed46-48bd-97fb-3b5247f637b0/device",
            "hreflang": null,
            "media": null,
            "title": null,
            "type": null,
            "deprecation": null
        },
        {
            "rel": "dpsks",
            "href": "https://jeff245.cloudpath.net/admin/apiv2/yRCjJObWR6ER/enrollments/
Enrollment-7084b41a-ed46-48bd-97fb-3b5247f637b0/dpsks",
            "hreflang": null,
            "media": null,
            "title": null,
            "type": null,
            "deprecation": null
        },
        {
            "rel": "macRegistrations",
            "href": "https://jeff245.cloudpath.net/admin/apiv2/yRCjJObWR6ER/enrollments/
Enrollment-7084b41a-ed46-48bd-97fb-3b5247f637b0/macRegistrations",
            "hreflang": null,
            "media": null,
            "title": null,
            "type": null,
            "deprecation": null
        }
    ]
},

```

## Core Cloudpath APIs

### Enrollment Resources and URIs

```
{
  "rel": "variables",
  "href": "https://jeff245.cloudpath.net/admin/apiv2/yRCjJObWR6ER/enrollments/
Enrollment-7084b41a-ed46-48bd-97fb-3b5247f637b0/variables",
  "hreflang": null,
  "media": null,
  "title": null,
  "type": null,
  "deprecation": null
}
]
```

## Device

You can use REST API v2 calls to obtain information about a device that gets registered during an enrollment.

The following table lists the properties that can be used in the body of a device-related request and/or are provided in the response body. (In the "Optional" column, if a default value is applicable, it is listed in angle brackets (< >).)

**TABLE 78** Resource: Device

Property Name	Type	Editable	Sort/Filter	Optional in Request/Response Body?	Description
name	String	No	sortBy, like	No	The type of the device; for example Windows 10.
operatingSystem	<Object> Embedded	No	None	No	The operating system details that were obtained.
browser	String	No	None	No	The browser used.
browserAgent	String	No	None	No	The user-agent string detected on the server.
browserManufacturer	String	No	None	No	The manufacturer of the browser used.
browserVersion	String	No	None	Yes	The version of the browser used.
formFactor	String	No	None	Yes	The form factor of the device used.
computerName	String	No	None	Yes	The name of the computer.
computerManufacturer	String	No	None	Yes	The manufacturer of the device.
computerModel	String	No	None	Yes	The model number or model name of the device.
nic	<Object> Embedded	No	None	Yes	The information on the nic, if obtained.
links	String	No	None	No	Self-referencing link, and enrollment link.

**TABLE 79** Resource: OperatingSystem

Property Name	Type	Editable	Sort/Filter	Optional in Request/Response Body?	Description
name	String	No	sortBy, like	No	The name of the operating system that the device is running.
manufacturer	String	No	None	Yes	The manufacturer of the operating system that the device is running.
family	String	No	None	Yes	The family of the operating system that the device is running.
version	String	No	None	Yes	The version of the operating system that the device is running.

**TABLE 79** Resource: OperatingSystem (continued)

Property Name	Type	Editable	Sort/Filter	Optional in Request/Response Body?	Description
servicePack	String	No	None	Yes	The service pack of the operating system that the device is running.
bits	String	No	None	Yes	The number of bits (32, 64) of the operating system that the device is running.

**TABLE 80** Resource: Nic

Property Name	Type	Editable	Sort/Filter	Optional in Request/Response Body?	Description
type	String	No	sortBy, like	No	The type of interface for the NIC used.
displayName	String	No	None	Yes	The display name of the NIC used.
macAddress	String	No	None	Yes	The MAC address of the NIC used.
model	String	No	None	Yes	The model number or model name of the NIC used.
name	String	No	None	Yes	The name of the NIC.
logicalName	String	No	None	Yes	The logical or display name of the NIC.

## Device URIs and Actions

The following table indicates the URIs that you can append to the root URI, along with the actions you can take, and possible return codes you can receive.

**TABLE 81** Device URIs and Actions

URI	Action	Description	Return Codes
/enrollments/{guid}/device	GET	Returns information about the device that was registered with this enrollment.	404 - Not found 401 - Unauthorized 200 - Ok

## Example of Using GET for Device

This example demonstrates how to obtain information about a device that is registered during an enrollment.

### URI:

This example uses the following URI:

```
https://Jeff245.cloudpath.net/admin/apiv2/yRCjJObWR6ER/enrollments/Enrollment-4718fcaa-d04f-43c3-a3f0-6ef3af6b9d59/device
```

where:

- <https://Jeff245.cloudpath.net/admin/apiv2> is the root URI of the Cloudpath system being used (must include https, as shown)
- yRCjJObWR6ER is an example of an API key generated from the **Configuration > API Keys** section of the Cloudpath UI
- Enrollment-4718fcaa-d04f-43c3-a3f0-6ef3af6b9d59 is the GUID of the enrollment

### Request Headers:

## Core Cloudpath APIs

### Enrollment Resources and URIs

The following table shows the required request headers for this URI example, with an example value of an active token that must be pasted into the Authorization header value:

**TABLE 82** Request Headers

Key	Value
Content-type	application/json
Authorization	eyJhbGciOiJIUzI1NiIsInR5cGU6IjY9LmVudWliOjIqZWZmLnJob2RpZUBjb21tc2NvcGUuY29tliwicm9sZVBrIjoieMjEwMDAiLCJhY2NvdW50QWRtaW5QayI6IjIiLCJhcGILZXkiOiJaV2NjTjGpQZUdZMGUilCjYXQjOjE1NzU1NzUxNTcslmV4cCl6MTU3NTU3NTQ1N30.2q4KTyDUevkAAz7mJyp529Be1-ip3EC8P06Xarmz5ao

#### Request Body:

None required.

#### Action:

Use the **GET** action to send the request.

#### Response Body:

Once the request is sent, you will receive a "Status: 200 OK" if the GET is successful. The response body provides information about the device of the enrollment that was specified.

```
{
  "name": "Windows 10",
  "browser": "Chrome 8",
  "browserAgent": "Browser",
  "browserManufacturer": "Google Inc.",
  "browserVersion": "87.0.4280.141",
  "formFactor": "Computer",
  "links": [
    {
      "rel": "self",
      "href": "https://jeff245.cloudpath.net/admin/apiv2/yRCjJObWR6ER/enrollments/Enrollment-4718fcaa-d04f-43c3-a3f0-6ef3af6b9d59/device",
      "hreflang": null,
      "media": null,
      "title": null,
      "type": null,
      "deprecation": null
    },
    {
      "rel": "parent",
      "href": "/apiv2/yRCjJObWR6ER/enrollments/Enrollment-4718fcaa-d04f-43c3-a3f0-6ef3af6b9d59",
      "hreflang": null,
      "media": null,
      "title": null,
      "type": null,
      "deprecation": null
    }
  ]
}
```

## Variables

You can use REST API v2 calls to obtain information about variables being used in an enrollment.

The following table lists the properties that can be used in the body of a variable-related request and/or are provided in the response body. (In the "Optional" column, if a default value is applicable, it is listed in angle brackets (< >).



**TABLE 83** Resource: **variable**

Property Name	Type	Editable	Sort/Filter	Optional in Request/Response Body?	Description
variable	String	No	No	No	Name of the variable.
value	String	No	No	Yes	Value of the variable (if the value was provided).

### variable URIs and Actions

The following table indicates the URIs that you can append to the root URI, along with the actions you can take, and possible return codes you can receive.

**TABLE 84** variable URIs and Actions

URI	Action	Description	Return Codes
/enrollments/{enrollguid}/variables	GET	Returns the complete list of enrollment variables used for this enrollment. This list of variable resources is sorted in ascending order and cannot be changed.	404 - Not found 401 - Unauthorized 200 - Ok

## SmsCountryCodes

You can use REST API v2 calls to obtain information about SMS country codes in your Cloudpath system.

The following table lists the properties that can be used in the body of a SmsCountryCodes-related request and/or are provided in the response body. (In the "Optional" column, if a default value is applicable, it is listed in angle brackets (< >).

**TABLE 85** Resource: SmsCountryCode

Property Name	Type	Editable	Sort/Filter	Optional in Request/Response Body?	Description
guid	String	No	like, sort	No	The unique identifier for this country code.
name	String	Yes	like, sort	No	The name of the country for this code.
code	int	Yes	like, sort	No	The country code.
links	links				Self-referencing link.

### SmsCountryCode URIs and Actions

The following table indicates the URIs that you can append to the root URI, along with the actions you can take, and possible return codes you can receive.

**TABLE 86** SmsCountryCode URIs and Actions

URI	Action	Description	Return Codes
/system/smsCountryCodes	GET	Returns the list of country codes in the Cloudpath system.	401 - Unauthorized
/system/smsCountryCodes{guid}	GET	Returns details about the specified country code.	404 - Not found 401 - Unauthorized

## Example of Using GET for SmsCountryCodes

This example demonstrates how to obtain information about all SmsCountryCodes in your system .

### URI:

This example uses the following URI:

```
https://Jeff245.cloudpath.net/admin/apiv2/yRCjJObWR6ER/system/smsCountryCodes
```

where:

- https://Jeff245.cloudpath.net/admin/apiv2 is the root URI of the Cloudpath system being used (must include https, as shown)
- yRCjJObWR6ER is an example of an API key generated from the **Configuration > API Keys** section of the Cloudpath UI

### Request Headers:

The following table shows the required request headers for this URI example, with an example value of an active token that must be pasted into the Authorization header value:

**TABLE 87** Request Headers

Key	Value
Content-type	application/json
Authorization	eyJhbGciOiJIUzI1NiJ9.eyJzdWUiOiJqZWZmLnJob2RpZUBjb21tc2NvcGUuY29tIiwicm9sZVBrIjoiaWJEWMDAilCjY2NvdW50QWRtaW5QayI6IjIiLCJhcGILZkxiOiJhV2NjTGpQZUdZMGUilCjYXQiOiJlNzU1NzUxNTcslmV4cCl6MTU3NTU3NTQ1N30.2q4KTyDUevkAAz7mJyp529Be1-ip3EC8P06Xarmz5ao

### Request Body:

None required.

### Action:

Use the **GET** action to send the request.

### Response Body:

Once the request is sent, you will receive a "Status: 200 OK" if the GET is successful. The response body provides information about all existing country codes.

#### NOTE

The snippet below is only partial output displaying three country codes.

```
{
  "page": {
    "page": 1,
    "pageSize": 10,
    "totalCount": 243
  },
  "contents": [
    {
      "guid": "10000",
      "code": 93,
      "name": "Afghanistan",
      "iso2Code": "AF",
      "links": [
        {
          "rel": "self",
          "href": "https://jeff245.cloudpath.net/admin/apiv2/yRCjJObWR6ER/system/smsCountryCodes/10000",
          "hreflang": null,
          "media": null,
          "title": null,
          "type": null,

```

```

        "deprecation": null
      }
    ]
  },
  {
    "guid": "10010",
    "code": 358,
    "name": "Aland Islands",
    "iso2Code": "AX",
    "links": [
      {
        "rel": "self",
        "href": "https://jeff245.cloudpath.net/admin/apiv2/yRCjJObWR6ER/system/smsCountryCodes/10010",
        "hreflang": null,
        "media": null,
        "title": null,
        "type": null,
        "deprecation": null
      }
    ]
  },
  {
    "guid": "10020",
    "code": 355,
    "name": "Albania",
    "iso2Code": "AL",
    "links": [
      {
        "rel": "self",
        "href": "https://jeff245.cloudpath.net/admin/apiv2/yRCjJObWR6ER/system/smsCountryCodes/10020",
        "hreflang": null,
        "media": null,
        "title": null,
        "type": null,
        "deprecation": null
      }
    ]
  },
  {
    "guid": "10030",
    "code": 213,
    "name": "Algeria",
    "iso2Code": "DZ",
    "links": [
      {
        "rel": "self",
        "href": "https://jeff245.cloudpath.net/admin/apiv2/yRCjJObWR6ER/system/smsCountryCodes/10030",
        "hreflang": null,
        "media": null,
        "title": null,
        "type": null,
        "deprecation": null
      }
    ]
  }
}

```

## Certificate Templates and Related Resources

### Certificate Templates

You can use REST API v2 calls to obtain information about certificate templates being used in the Cloudpath system.

The following table lists the properties that can be used in the body of a certificate-template-related request and/or are provided in the response body. (In the "Optional" column, if a default value is applicable, it is listed in angle brackets (< >).)

**TABLE 88** Resource: Certificate Templates

Property Name	Type	Editable	Sort/Filter	Optional in Request/Response Body?	Description
guid	String	No	Neither	No	The unique identifier for this authentication server.
name	String	Yes	orderBy, like	No	The unique reference name of the authentication server.
caType		Yes	in, eq, orderBy	No	The type of certificate to be used: ONBOARD, MICROSOFT_CA, CUSTOM, INCOMMON, NETWORK_FX  <b>NOTE</b> Sort order is as listed above, not alphabetical.
detail	One of the following: Onboard, Incommon, MicrosoftCa, NetworkFx, or Custom.	Yes	Neither	No	This property is always included and must match the caType provided in the template.
<a href="#">RADIUS Attribute Groups</a> on page 24	Object <RadiusAttributeGroup>	Yes	Neither	No	If the certificate template is not using a policy (pre-Cloudpath release 5.8), a RADIUS attribute group is provided here, detailing the information that the template provides for RADIUS.
defaultAccess	String <Enum>	Yes	orderBy, like	default=REJECT	When no policies are assigned, or when policies are assigned but no match is found against any of the policies, the default access for authentication is either: ACCEPT or REJECT.
allowAuthRadius	Boolean	Yes	eq, orderBy	default=true	If selected, the RADIUS server will contain policy information for this certificate template.
workflowCount	int	No	Neither	default = 0	Indicates the number of workflows to which this template has been assigned.
issuedCertificateCount	int	No	Neither	default = 0	Indicates the number of issued certificates to which this template has been assigned.
authorizedEnrollmentsCount	int	No	Neither	default = 0	Indicates the number of authorized enrollments to which this template has been assigned.
links[]	Link array	No	No	No	Self-referencing link, and links to: certificates, msiPackages, notifications, scepKeys, and assignedPolicies.

**TABLE 89** Resource: Onboard

Property Name	Type	Editable	Sort/Filter	Optional in Request/Response Body?	Description
commonNamePattern	String	Yes	Neither	No	The pattern used to determine the common name for certificates generated using this template.
validPeriod	Object <Embedded>	Yes	Neither	No	The timeframe for when this certificate remains valid.
keyLength	Number	Yes	Neither	No	The key length: a valid number between 512 and 4096.

**TABLE 89** Resource: Onboard (continued)

Property Name	Type	Editable	Sort/Filter	Optional in Request/Response Body?	Description
algorithm	String <Enum>	Yes	Neither	No	The algorithm, as dictated by the CA. <ul style="list-style-type: none"> <li>SHA-1: The SHA-1 hash</li> <li>SHA-256: The SHA-2 hash using 256 bits</li> <li>SHA-384: The SHA-2 hash using 384 bits</li> <li>SHA-512: The SHA-2 hash using 512 bits</li> </ul>
organizationPattern	String	Yes	Neither	Yes	The pattern used to determine the organization for certificates generated using this template.
unitPattern	String	Yes	Neither	Yes	The pattern used to determine the organization unit for certificates generated using this template.
localityPattern	String	Yes	Neither	Yes	The pattern used to determine the locality for certificates generated using this template.
statePattern	String	Yes	Neither	Yes	The pattern used to determine the state for certificates generated using this template.
countryPattern	String	Yes	Neither	Yes	The pattern used to determine the country for certificates generated using this template.
type	String <Enum>	Yes	Neither	Yes; default is USER_DEVICE	Controls whether the validity of the certificate is dependant on an identity: <ul style="list-style-type: none"> <li>USER_DEVICE: The validity of the certificate is based, in part, on the identity of the user (if an identity exists in the enrollment). If the user is blocked, the certificate will be blocked.</li> <li>DEVICE: The validity of the certificate does not take into consideration the identity of the user. If the user is blocked, the certificate will not be affected.</li> </ul>
ekuHotSpot	Boolean	Yes	Neither	Yes; default is false	List of the extended key usage (EKUs) object identifiers (OIDs) inserted into certificates generated using this template. If this template is being used to generate a device certificate, the certificate must contain the client EKU. If this template is being used to generate a RADIUS server certificate, the certificate must contain the server EKU. If this template is being used to generate a Domain Controller certificate, the certificate must contain both the client and the server EKUs.
ekuMsClient	Boolean	Yes	Neither	Yes; default is false	See "ekuHotspot" description.
ekuMsServer	Boolean	Yes	Neither	Yes; default is true.	See "ekuHotspot" description.
advancedPatterns	Object <embedded>	Yes	Neither	Yes	Refer to the "advancedPatterns" resource table.
link					Link to the caAuthority.

**TABLE 90** Resource: validPeriod

Property Name	Type	Editable	Sort/Filter	Optional in Request/Response Body?	Description
notBeforeOffset	Number	Yes	Neither	No; default = 1	A number representing how to apply the <i>notbeforeDataType</i> property.
notBeforeDate	String <Date>	Yes	Neither	See "Description" column.	If the "notBeforeDateType" (see next entry in this table) is "SPECIFIED_DATE", then this property must be set.

**TABLE 90** Resource: validPeriod (continued)

Property Name	Type	Editable	Sort/Filter	Optional in Request/Response Body?	Description
notBeforeDateType	String <Enum>	Yes	Neither	Yes	Indicates how to apply the date offset when defining the start period for certificates that are granted:  SPECIFIED_DATE, IMMEDIATE, HOURS_AFTER_TIME, DAYS_AFTER_TIME, WEEKS_AFTER_TIME, MONTHS_AFTER_TIME, QUARTERS_AFTER_TIM, YEARS_AFTER_TIME, END_OF_HOUR, END_OF_DAY, END_OF_WEEK, END_OF_MONTH, END_OF_QUARTER, END_OF_YEAR, HOURS_BEFORE_TIME, DAYS_BEFORE_TIME, WEEKS_BEFORE_TIME, MONTHS_BEFORE_TIME, QUARTERS_BEFORE_TIME, YEARS_BEFORE_TIME, START_OF_HOUR, START_OF_DAY, START_OF_WEEK, START_OF_MONTH, START_OF_QUARTER, START_OF_YEAR, MINUTES_AFTER_TIME, MINUTES_BEFORE_TIME, END_OF_HALF, or START_OF_HALF
notAfterOffset	Number	Yes	Neither	No; default=1	The method used to calculate the expiration date for certificates generated using this template.
notAfterDate	String <Date>	Yes	Neither	See the "description" for this property.	If the "notAfterDateType" property (see next table entry) is "SPECIFIED_DATE", the notAfterDate property must be set.
notAfterDateType	String <Enum>	Yes	Neither	Default is in MONTHS.	Indicates how the date offset is to be applied when defining the expiration date for certificates that are granted:  SPECIFIED_DATE, IMMEDIATE, HOURS_AFTER_TIME, DAYS_AFTER_TIME, WEEKS_AFTER_TIME, MONTHS_AFTER_TIME, QUARTERS_AFTER_TIM, YEARS_AFTER_TIME, END_OF_HOUR, END_OF_DAY, END_OF_WEEK, END_OF_MONTH, END_OF_QUARTER, END_OF_YEAR, HOURS_BEFORE_TIME, DAYS_BEFORE_TIME, WEEKS_BEFORE_TIME, MONTHS_BEFORE_TIME, QUARTERS_BEFORE_TIME, YEARS_BEFORE_TIME, START_OF_HOUR, START_OF_DAY, START_OF_WEEK, START_OF_MONTH, START_OF_QUARTER, START_OF_YEAR, MINUTES_AFTER_TIME, MINUTES_BEFORE_TIME, END_OF_HALF, or START_OF_HALF
ocspMonitor	Boolean	Yes	Neither	Default is false.	As the certificate is used, the system receives OCSP requests. The system can monitor the last usage of the certificate and automatically revoke the certificate if it remains unused for an extended period of time.
ocspRevokeDays	number	Yes	Neither	No	Defaults to 30 days.

**TABLE 91** Resource: advancedPatterns

Property Name	Type	Editable	Sort/Filter	Optional in Request/Response Body?	Description
email	String	Yes	Neither	Yes	The pattern used to determine the email for certificates generated using this template.

**TABLE 91** Resource: advancedPatterns (continued)

Property Name	Type	Editable	Sort/Filter	Optional in Request/Response Body?	Description
sanOtherNamesList	List <String>	Yes	Neither	Yes	The pattern used to determine the Other Name entry of the Subject Alternative Name (SAN) for certificates generated using this template. The SAN Other Name Pattern entry is a value string, which can be a short name, long name, or numerical format.
sanRfc822	String	Yes	Neither	Yes	The pattern used to determine the RFC822 (email) entry of the Subject Alternative Name (SAN) for certificates generated using this template. The SAN RFC822 Pattern entry must be in the form : "local-part@domain".
sanDnsNames	List <String>	Yes	Neither	Yes	The pattern used to determine the DNS Name entry of the Subject Alternative Name (SAN) for certificates generated using this template. The SAN DNS Name Pattern must follow the 'preferred name syntax' as specified in RFC 1035.
sanUrl	String	Yes	Neither	Yes	The pattern used to determine the URI entry of the Subject Alternative Name (SAN) for certificates generated using this template. The SAN URL Pattern must contain both a scheme (http, https, or ftp) and a scheme-specific-part. The scheme-specific-part must include a fully qualified domain name or IP address as the host.
sanIp	String	Yes	Neither	Yes	The pattern used to determine the IP entry of the Subject Alternative Name (SAN) for certificates generated using this template. The SAN IP Pattern can be in either IPv4 or IPv6 format.
sanRid	String	Yes	Neither	Yes	The pattern used to determine the RID (registered object ID) entry of the Subject Alternative Name (SAN) for certificates generated using this template. The SAN RID Pattern must be in the form of an OID string, which is a string that contains digits (0-9) and decimal points (.). For example: "1.2.3.4".
title	String	Yes	Neither	Yes	The pattern used to determine the title for certificates generated using this template.

**TABLE 92** Resource: Incommon

Property Name	Type	Editable	Sort/Filter	Optional in Request/Response Body?	Description
adminName	String	Yes	Neither	No	The username of an administrator within the inCommon admin UI.
adminPassword	String	Yes	Neither	No	The password of an administrator within the inCommon admin UI.
organizationId	Number	Yes	Neither	No	The organization Id required for inCommon.
apiSecret	String	Yes	Neither	No	The api secret required for inCommon.
realmsList	List <String>	Yes	Neither	Yes	A list of the realms from which the inCommon certificate may be issued. The name of the realm typically begins with the character "@", and can also contain a wildcard (*).
server	String <Enum>	Yes	Neither		The inCommon server name for this certificate. Will be: PRODUCTION or TEST

**TABLE 92** Resource: Incommon (continued)

Property Name	Type	Editable	Sort/Filter	Optional in Request/Response Body?	Description
certHasEmail	Boolean	Yes	Neither	No; default = true	If true, the user's email address is included in the certificate. If false, the user's email address is not included.

**TABLE 93** Resource: MicrosoftCA

Property Name	Type	Editable	Sort/Filter	Optional in Request/Response Body?	Description
caUrl	String	No	Neither	No	The URL of the Integration Module. This is typically similar to the following: <a href="https://servername.domain.com/">https://servername.domain.com/</a>
caHost	String	No	Neither	No	The DNS name of the CA server.
caName	String	No	Neither	No	The name of the CA. This appears in the Certificate Authority console.
requestAttributes	List <String>	No	Neither	Yes	The attributes used when querying the CA. This typically includes at minimum the certificate-template name.
caChain	String	No	Neither	Yes	Provides the CA chain for certificates issued by the remote CA. The certificates should be concatenated together in PEM format.
keyLength	Number	No	Neither	No	The key length: A valid number between 512 and 4049.
algorithm	String <Enum>	No	Neither	No	The algorithm, as dictated by the CA. <ul style="list-style-type: none"> <li>SHA-1: The SHA-1 hash</li> <li>SHA-256: The SHA-2 hash using 256 bits</li> <li>SHA-384: The SHA-2 hash using 384 bits</li> <li>SHA-512: The SHA-2 hash using 512 bits</li> </ul>
useStaticCredentials	boolean	No	Neither	No; default= false	Indicates whether the CA should use the static credentials.
staticUserName	String	No	Neither	Yes	The username to use when interacting with the external CA.
staticPassword	String	No	Neither	Yes	The password to use when interacting with the external CA.
customCsr	customMsCsr	No	Neither	No	Allows use of custom Csr; provide this resource if you want to apply the custom csr.

**TABLE 94** Resource: customMsCsr

Property Name	Type	Editable	Sort/Filter	Optional in Request/Response Body?	Description
commonNamePattern	String	Yes	Neither	Yes	If the template within Microsoft CA is configured to allow the subject to be supplied by the caller in the CSR, the value or pattern specified here will be used in the CSR.
organizationPattern	String	Yes	Neither	Yes	If the template within Microsoft CA is configured to allow the subject to be supplied by the caller in the CSR, the value or pattern specified here will be used in the CSR.
unitPattern	String	Yes	Neither	Yes	If the template within Microsoft CA is configured to allow the subject to be supplied by the caller in the CSR, the value or pattern specified here will be used in the CSR.



**TABLE 94** Resource: customMsCsr (continued)

Property Name	Type	Editable	Sort/Filter	Optional in Request/Response Body?	Description
localityPattern	String	Yes	Neither	Yes	If the template within Microsoft CA is configured to allow the subject to be supplied by the caller in the CSR, the value or pattern specified here will be used in the CSR.
statePattern	String	Yes	Neither	Yes	If the template within Microsoft CA is configured to allow the subject to be supplied by the caller in the CSR, the value or pattern specified here will be used in the CSR.
countryPattern	String	Yes	Neither	Yes	If the template within Microsoft CA is configured to allow the subject to be supplied by the caller in the CSR, the value or pattern specified here will be used in the CSR.

**TABLE 95** Resource: NetworkFx

Property Name	Type	Editable	Sort/Filter	Optional in Request/Response Body?	Description
baseUrl	String	Yes	Neither	No	The base URL for the Network FX service.
profileName	String	Yes	Neither	No	The certificate profile name within the Network FX service.
organization	String	Yes	Neither	No	NetworkFX requires that CSRs contain the organization. This value will be used as the organization (O) in the CSR.
organizationUnit	String	Yes	Neither	No	NetworkFX requires that CSRs contain the organization unit. This value will be used as the organization unit (OU) in the CSR.
country	String	Yes	Neither	No	NetworkFX requires that CSRs contain the country. This value will be used as the country (C) in the CSR.
serverChain	String	Yes	Neither	Yes	One or more CA certificates in PEM (BASE64) format.
clientChain	String	Yes	Neither	Yes	One or more CA certificates in PEM (BASE64) format.

**TABLE 96** Resource: Custom

Property Name	Type	Editable	Sort/Filter	Optional in Request/Response Body?	Description
caUrl	String	Yes	Neither	No	The URL of the external CA.
caChain	String	Yes	Neither	Yes	Provide the CA chain for certificates issued by the remote CA. The certificates should be concatenated together in PEM format.
useStaticCredentials	Boolean	Yes	Neither	Yes	By default, the system will use the user's credentials when interacting with the external CA. However, if this option is selected, the static credentials specified will be used when interacting with the external CA.
staticUserName	String	Yes	Neither	Yes	The username to use when interacting with the external CA.
staticPassword	String	Yes	Neither	Yes	The password to use when interacting with the external CA.

## Certificate Templates URIs and Actions

The following table indicates the URIs that you can append to the root URI, along with the actions you can take, and possible return codes you can receive.

**TABLE 97** Certificate Templates URIs and Actions

URI	Action	Description	Return Codes
/certificateTemplates	GET	Returns the list of certificate templates.	404 - Not found 401 - Unauthorized 200 - Ok
/certificateTemplates/{id}	GET	Returns details about the specified certificate template.	

### Example of Using GET for Certificate Templates

This example demonstrates how to obtain information about all certificate templates.

#### URI:

This example uses the following URI:

```
https://Jeff245.cloudpath.net/admin/apiv2/yRCjJObWR6ER/certificateTemplates
```

where:

- <https://Jeff245.cloudpath.net/admin/apiv2> is the root URI of the Cloudpath system being used (must include https, as shown)
- yRCjJObWR6ER is an example of an API key generated from the **Configuration > API Keys** section of the Cloudpath UI

#### Request Headers:

The following table shows the required request headers for this URI example, with an example value of an active token that must be pasted into the Authorization header value:

**TABLE 98** Request Headers

Key	Value
Content-type	application/json
Authorization	eyJhbGciOiJIUzI1NiJ9.eyJzdWIiOiJqZWZmLnJob2RpZUBjb21tc2NvcGUuY29tliwicm9sZVBrJoiMjEwMDAiLCJhY2NvdW50QWRtaW50Qayl6jIiLCJhcGILZXRkiOiJaV2NjTGpQZUdZMGUuIiLCJpYXQiOiJlNzU1NzUxNTcsmV4cCi6MTU3NTU3NTQ1N30.2q4KTyDUevkAAz7mJyp529Be1-ip3EC8P06Xarmz5ao

#### Request Body:

None required.

#### Action:

Use the **GET** action to send the request.

#### Response Body:

Once the request is sent, you will receive a "Status: 200 OK" if the GET is successful. The response body provides information about all existing certificate templates, as shown in the following example display.

```
{
  "page": {
    "page": 1,
    "pageSize": 2,
    "totalCount": 2
  }
}
```

```

},
"contents": [
  {
    "guid": "1",
    "name": "Server Template",
    "caType": "ONBOARD",
    "detail": {
      "commonNamePattern": "${SERVER_NAME}",
      "validPeriod": {
        "notBeforeOffset": 1,
        "notBeforeDate": "2021-02-20T01:12:54.515Z",
        "notBeforeDateType": "MONTHS_BEFORE_TIME",
        "notAfterOffset": 3,
        "notAfterDate": "2021-02-20T01:12:54.515Z",
        "notAfterDateType": "YEARS_AFTER_TIME",
        "ocspMonitor": false,
        "ocspRevokeDays": 30
      },
      "keyLength": 2048,
      "algorithm": "SHA256WITHRSA",
      "organizationPattern": "Sample Company, Inc.",
      "unitPattern": "IT",
      "localityPattern": "Westminster",
      "statePattern": "Colorado",
      "countryPattern": "US",
      "type": "IDENTITY_BASED",
      "ekuHotSpot": false,
      "ekuMsClient": false,
      "ekuMsServer": true,
      "keyUsageList": [
        "DIGITAL_SIGNATURE",
        "KEY_ENCIIPHERMENT"
      ],
      "advancedPatterns": {
        "emailPattern": "it@company.com",
        "sanOtherNamesList": "",
        "sanRfc822": "",
        "sanDnsNames": "",
        "sanUrl": "",
        "sanIp": "",
        "sanRid": "",
        "title": ""
      }
    },
    "allowsRadiusAuth": false,
    "defaultAccess": "ACCEPT",
    "workflowCount": 0,
    "issuedCertificateCount": 1,
    "authorizedEnrollmentsCount": 0,
    "status": "ENABLED",
    "links": [
      {
        "rel": "self",
        "href": "https://jeff245.cloudpath.net/admin/apiv2/yRCjJObWR6ER/certificateTemplates/1",
        "hreflang": null,
        "media": null,
        "title": null,
        "type": null,
        "deprecation": null
      },
      {
        "rel": "certificates",
        "href": "https://jeff245.cloudpath.net/admin/apiv2/yRCjJObWR6ER/certificateTemplates/1/certificates?page=1&pageSize=10{&filter,orderBy}",
        "hreflang": null,
        "media": null,
        "title": null,
        "type": null,
        "deprecation": null
      },
      {
        "rel": "msiPackages",

```

## Core Cloudpath APIs

### Certificate Templates and Related Resources

```
        "href": "https://jeff245.cloudpath.net/admin/apiv2/yRCjJObWR6ER/certificateTemplates/1/
msiPackages?page=1&pageSize=10{&filter,orderBy}",
        "hreflang": null,
        "media": null,
        "title": null,
        "type": null,
        "deprecation": null
    },
    {
        "rel": "policies",
        "href": "https://jeff245.cloudpath.net/admin/apiv2/yRCjJObWR6ER/certificateTemplates/1/
policies",
        "hreflang": null,
        "media": null,
        "title": null,
        "type": null,
        "deprecation": null
    }
]
},
{
    "guid": "2",
    "name": "username@byod.company.com",
    "caType": "ONBOARD",
    "detail": {
        "commonNamePattern": "${USERNAME}@byod.company.com",
        "validPeriod": {
            "notBeforeOffset": 1,
            "notBeforeDate": "2021-02-20T01:12:54.518Z",
            "notBeforeDateType": "MONTHS_BEFORE_TIME",
            "notAfterOffset": 1,
            "notAfterDate": "2021-02-20T01:12:54.518Z",
            "notAfterDateType": "YEARS_AFTER_TIME",
            "ocspMonitor": false,
            "ocspRevokeDays": 30
        },
        "keyLength": 2048,
        "algorithm": "SHA256WITHRSA",
        "organizationPattern": "Sample Company, Inc.",
        "unitPattern": "IT",
        "localityPattern": "Westminster",
        "statePattern": "Colorado",
        "countryPattern": "US",
        "type": "IDENTITY_BASED",
        "ekuHotSpot": true,
        "ekuMsClient": true,
        "ekuMsServer": false,
        "keyUsageList": [
            "DIGITAL_SIGNATURE",
            "KEY_ENCIIPHERMENT"
        ],
        "advancedPatterns": {
            "emailPattern": "",
            "sanOtherNamesList": "",
            "sanRfc822": "",
            "sanDnsNames": "",
            "sanUrl": "",
            "sanIp": "",
            "sanRid": "",
            "title": ""
        }
    },
    "allowsRadiusAuth": true,
    "defaultAccess": "ACCEPT",
    "workflowCount": 1,
    "issuedCertificateCount": 0,
    "authorizedEnrollmentsCount": 0,
    "status": "ENABLED",
    "links": [
        {
            "rel": "self",
            "href": "https://jeff245.cloudpath.net/admin/apiv2/yRCjJObWR6ER/certificateTemplates/2",
```

```

        "hreflang": null,
        "media": null,
        "title": null,
        "type": null,
        "deprecation": null
    },
    {
        "rel": "certificates",
        "href": "https://jeff245.cloudpath.net/admin/apiv2/yRCjJObWR6ER/certificateTemplates/2/certificates?page=1&pageSize=10{&filter,orderBy}",
        "hreflang": null,
        "media": null,
        "title": null,
        "type": null,
        "deprecation": null
    },
    {
        "rel": "msiPackages",
        "href": "https://jeff245.cloudpath.net/admin/apiv2/yRCjJObWR6ER/certificateTemplates/2/msiPackages?page=1&pageSize=10{&filter,orderBy}",
        "hreflang": null,
        "media": null,
        "title": null,
        "type": null,
        "deprecation": null
    },
    {
        "rel": "policies",
        "href": "https://jeff245.cloudpath.net/admin/apiv2/yRCjJObWR6ER/certificateTemplates/2/policies",
        "hreflang": null,
        "media": null,
        "title": null,
        "type": null,
        "deprecation": null
    }
}
]
}
}
}
}

```

## Certificates

You can use REST API v2 calls to obtain information about certificates within a specified certificate template as well as make changes to those certificates.

The following table lists the properties that can be used in the body of a certificate-related request and/or are provided in the response body. (In the "Optional" column, if a default value is applicable, it is listed in angle brackets (<>).)

**TABLE 99** Resource: Certificate

Property Name	Type	Editable	Sort/Filter	Optional in Request/Response Body?	Description
guid	String	No	orderBy, like	Optional on create only, but not on any subsequent uses.	The unique identifier for this certificate.
commonName	String	No	orderBy, like	No	The common name for this certificate

**TABLE 99** Resource: Certificate (continued)

Property Name	Type	Editable	Sort/Filter	Optional in Request/Response Body?	Description
status	String<Enum>	Yes	orderBy, in, eq	No	ISSUED, ISSUED_AND_CONFIRMED_USE, REVOKED, or EXPIRED.  A PUT can be used to revoke the certificate.  Unrevoking the certificate changes the status to ISSUED or ISSUED_AND_CONFIRMED_USE, whichever is applicable. One caveat is that, if the certificate has expired, a PUT request for a status change will result in an "EXPIRED" status.
revokedReason	String	Yes	orderBy, like	Yes/No	If changing the status to REVOKED, a reason is required.
revokedDate	DateTime	No	orderBy	Yes	(ISO 8601) The date that this certificate was revoked. Will be provided if the certificate is revoked.
notValidBefore	DateTime<String>	No	orderBy	Yes	(ISO 8601) The date and time after which this certificate will work.
notValidAfter	DateTime<String>	No	orderBy	No	(ISO 8601) The date and time after which this certificate expires.
serialNumber	String	No	orderBy, like	No	The serial number included in the certificate.
keyLength	number	No	orderBy, like	No	The length of the key.
shaFingerprint	String	No	orderBy	No	The SHA fingerprint of the certificate.
organization	String	No	orderBy, like	No	The organization (O) included in the certificate.
organizationUnit	String	No	orderBy, like	No	The organization unit (OU) included in the certificate.
locality	String	No	orderBy, like	No	The locality included in the certificate.
state	String	No	orderBy, like	No	The state included in the certificate.
country	String	No	orderBy, like	No	The country included in the certificate.
usage	RadiusUsage<Embedded>	No	See the "Resource: RadiusUsage" table.	No	See the "Resource: RadiusUsage" table.
links[]	Link array	No	No	No	Self-referencing link, and links to: certificateTemplate, enrollment

**TABLE 100** Resource: RadiusUsage

Property Name	Type	Editable	Sort/Filter	Optional in Request/Response Body?	Description
issued	DateTime<String>	No	orderBy	No	(ISO 8601) Date/time when the certificate was issued.
lastSessionStartTime	DateTime<String>	No	orderBy	yes	(ISO 8601) The time that the current (or latest) session started.

**TABLE 100** Resource: RadiusUsage (continued)

Property Name	Type	Editable	Sort/Filter	Optional in Request/Response Body?	Description
lastSessionStopTime	DateTime<String>	No	orderBy	yes	(ISO 8601) The time that the latest session ended.
lastIpAddress	String	No	orderBy, like	yes	The last IP address of the client, as reported via RADIUS accounting.
lastSsid	String	No	orderBy, like	yes	The SSID for the latest RADIUS authentication or accounting request from the certificate.
lastMacAddress	String	No	orderBy, like	Yes	The lastMacAddress string.
lastNasId	String	No	orderBy, like	yes	The NAS identifier for the latest RADIUS authentication or accounting request from the certificate.
lastNasPort	number	No	orderBy, like	yes	The NAS port ID for the latest RADIUS authentication or accounting request from the certificate.
lastOcp	DateTime<String>	No	none	yes	ISO8601- The last time that this certificate was validated via OCSP. This timestamp is updated a maximum of once every 10 minutes.
lastPolicyAssigned	String	No	orderBy, like	yes	The last policy assigned, if the template uses policies.
lastSuccess	DateTime<String>	No	orderBy	yes	(ISO 8601) The last timestamp that this certificate was successfully authenticated by RADIUS.
lastFailure	DateTime<String>	No	orderBy	yes	ISO8601- The last timestamp that this certificate had an unsuccessful attempt at being authenticated by RADIUS.

### Certificate URIs and Actions

The following table indicates the URIs that you can append to the root URI, along with the actions you can take, and possible return codes you can receive.

**TABLE 101** Certificate URIs and Actions

URI	Action	Description	Return Codes
/certificateTemplates/{tempGuid}/certificates	GET	Returns the list of certificates that were issued using the specified certificate template.	404 - Not found 401 - Unauthorized 200 - Ok
/certificateTemplates/{tempGuid}/certificates/{guid}	GET	Returns details about the specific certificate that was issued using the specified certificate template.	404 - Not found 401 - Unauthorized 200 - Ok
	PUT	Allows the change of status to "REVOKED", "ISSUED, or ISSUED_AND_CONFIRMED_USE" only.  Unrevoking would change the status to ISSUED or ISSUED_AND_CONFIRMED_USE. The certificate would assume the applicable status.  If the state change request cannot be made, a "409 - Conflict" error is returned.	409 - Conflict 404 - Not found 401 - Unauthorized 200 - Ok

### Example of Using GET for Certificates Within a Specific Certificate Template

This example demonstrates how to obtain information about all certificates within a specific certificate template.

#### URI:

This example uses the following URI:

```
https://Jeff245.cloudpath.net/admin/apiv2/yRCjJObWR6ER/certificateTemplates/1/certificates
```

where:

- `https://Jeff245.cloudpath.net/admin/apiv2` is the root URI of the Cloudpath system being used (must include https, as shown)
- `yRCjJObWR6ER` is an example of an API key generated from the **Configuration > API Keys** section of the Cloudpath UI
- `1` is the GUID for the certificate template from which to obtain a list of all its certificates.

#### Request Headers:

The following table shows the required request headers for this URI example, with an example value of an active token that must be pasted into the Authorization header value:

**TABLE 102** Request Headers

Key	Value
Content-type	application/json
Authorization	eyJhbGciOiJIUzI1NiIsInR5cGU6IjY9Iiwicm9sZVBrIjoieWMDAilCjY2NvdW50QWRtaW5QayI6IjIiLCJhcGILXkiOiV2NjTGPQZUdZMGUilCjYXQiOiE1NzU1NzUxNTcsmV4cCl6MTU3NTU3NTQ1N30.2q4KTyDUevkAAz7mJyp529Be1-ip3EC8P06Xarmz5ao

#### Request Body:

None required.

#### Action:

Use the **GET** action to send the request.

#### Response Body:

Once the request is sent, you will receive a "Status: 200 OK" if the GET is successful. The response body provides information about the certificates from the specified certificate template. In this example, only one certificate was issued from the specified certificate template, as shown in the response body below.

```
{
  "page": {
    "page": 1,
    "pageSize": 1,
    "totalCount": 1
  },
  "contents": [
    {
      "guid": "1",
      "commonName": "jeff245.cloudpath.net",
      "status": "ISSUED_AND_CONFIRMED_USE",
      "notValidBefore": "2021-01-09T19:38:34Z",
      "notValidAfter": "2024-02-09T19:38:34Z",
      "serialNumber": "698fae00f75f419d3cfc56a19b49f66c1bc604ff",
      "keyLength": 2048,
      "shaFingerprint": "80325204AB8104CCC1740408DCADFB33AC1CE19A",
      "organization": "Sample Company, Inc.",
      "organizationUnit": "IT",
      "locality": "Westminster",
      "state": "Colorado",
      "country": "US",
      "radiusUsage": {
```



```

    "issued": "2021-02-09T19:38:34Z",
    "lastIpAddress": "",
    "lastSsid": "",
    "lastNasId": "",
    "lastNasPort": "",
    "lastOcp": "2021-02-12T20:05:14Z"
  },
  "links": [
    {
      "rel": "parent",
      "href": "https://jeff245.cloudpath.net/admin/apiv2/yRCjJObWR6ER/certificateTemplates/1",
      "hreflang": null,
      "media": null,
      "title": null,
      "type": null,
      "deprecation": null
    },
    {
      "rel": "self",
      "href": "https://jeff245.cloudpath.net/admin/apiv2/yRCjJObWR6ER/certificateTemplates/1/certificates/1",
      "hreflang": null,
      "media": null,
      "title": null,
      "type": null,
      "deprecation": null
    }
  ]
}
]
}
}

```

## Msi Packages

You can use REST API v2 calls to obtain information about the Msi packages in a certificate.

The following table lists the properties that can be used in the body of an Msi package-related request and/or are provided in the response body. (In the "Optional" column, if a default value is applicable, it is listed in angle brackets (<>).

**TABLE 103** Resource: Msi Package

Property Name	Type	Editable	Sort/Filter	Optional in Request/Response Body?	Description
guid	String	No	like, orderBy	No	The unique identifier for this Msi package.
name	String	Yes	like, orderBy	No	The unique reference name of the Msi package.
description	String	Yes	like, orderBy	Yes	Description of the Msi package.
certificateStoreType	String<Enum >	Yes	like, orderBy	No	MACHINE or USER
userNameSource	String<Enum >	Yes	like, orderBy	No	CURRENT_USER, or COMPUTER_NAME
enabled	Boolean	Yes	eq, orderBy	No; default = true	Indicates whether this package should be used.
expirationDate	Date	Yes	Neither	No	(ISO 8601) Date that this package expires.
allowedSubnets	List<Strings>	Yes	Neither	Yes	If populated, only the IP addresses or subnets specified are allowed to use the MSI.

**TABLE 103** Resource: Msi Package (continued)

Property Name	Type	Editable	Sort/Filter	Optional in Request/Response Body?	Description
blockedSubnets	List<Strings>	Yes	Neither	Yes	If populated, the IP addresses or subnets specified are blocked from using the MSI. Blocked subnets override the allowed subnets.
productName	String	Yes	like, orderBy	Yes	The product name for the Msi.
productId	String	Yes	like, orderBy	Yes	The product ID for the Msi.
links[]	Link array	NO	No	No	Self-referencing link and link for the certificateTemplate.

### *Msi Package URIs and Actions*

The following table indicates the URIs that you can append to the root URI, along with the actions you can take, and possible return codes you can receive.

**TABLE 104** Msi Package URIs and Actions

URI	Action	Description	Return Codes
/certificateTemplates/{certGuid}/msiPackages	GET	Returns the list of Msi packages assigned to the specified certificate template	404 - Not found 401 - Unauthorized 200 - Ok
/certificateTemplates/{certGuid}/msiPackages/{guid}	GET	Returns details about the requested Msi Package assigned to the specified certificate template.	404 - Not found 401 - Unauthorized 200 - Ok

# Tenant Portal APIs

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## Tenant Portal API Requirements

This topic describes how to obtain a tenant portal API authorization token, and provides the format of the root tenant portal API.

### Obtaining Authorization Token Required for All Tenant Portal APIs

Tenant portal APIs use Json Web Tokens (JWT) to secure all endpoints; however, the authentication is accessed from an *apiHashSecret* that is mapped to each unit.

1. You can obtain an *apiHashSecret* for each unit of your property from the response body of a GET call:

```
properties/{propertyGuid}/units
```

or

```
properties/{propertyGuid}/units/{unitGuid}
```

This is a Cloudpath core API, not a tenant portal API. For more information, refer to [Example of Using GET for Units](#) on page 80. The response output includes a unique *apiHashSecret* for each unit returned in the response. For example, the *apiHashSecret* returned for the unit called "Apartment 1" in [Example of Using GET for Units](#) on page 80 is:

```
"apiHashSecret": "CPNENCv2:BC|E30EECAF-AEFE-41F5-BBF9-5D3D450155AB|1JCWKjdHjnjH6iwHS/V0A==:oXgm2xCUIPuD8yFKYZnNDQ=="
```

Therefore, you would use that *apiHashSecret* to log in to (and get authenticated with) that particular unit only.

2. Set up the the tenant portal API to log in to the unit:

- a. Create the URI by using the format:

```
https://<Your_Cloudpath_System>/admin/rest/tenant/<API-KEY>/properties/<Property-GUID>/units/login
```

Replacing the bold values with actual values, an example API to log in is:

```
https://Jeff245.cloudpath.net/admin/rest/tenant/yRCjJObWR6ER/properties/Property-afaccdf8-5e39-41ce-9098-9747cc38aaa0/units/login
```

Where:

- <https://Jeff245.cloudpath.net/admin/rest/tenant> is the root URI of the Cloudpath system being used (must include https, as shown)
  - `yRCjJObWR6ER` is an example of an API key generated from the **Configuration > API Keys** section of the Cloudpath UI
  - `Property-afaccdf8-5e39-41ce-9098-9747cc38aaa0` is the GUID of the property that contains the units in question.
- b. Use a POST call.



**TABLE 106** Resource: Properties

Property Name	Type	Editable	Sort/Filter	Optional in Request/Response Body?	Description
guid	String	No	sortBy, like	Optional on create only, but not on any subsequent uses.	The unique identifier for this property.
name	String	Yes	sortBy, like	No	The display name for this property, must be unique
address	String	Yes	sortBy, like	Yes	The address for this property.
description	String	Yes	sortBy, like	Yes	A description for this property.
enforceMaxUnits	Boolean	Yes	sortBy, like	Yes<false>	Indicates if a value configured for "max units" will be enforced when adding a unit to the property.
maxUnits	int	Yes	sortBy, like	No<0>	The maximum number of units permitted for this property.
allowSeparateGuestSecret	Boolean	Yes	sortBy, like	Yes<true>	Indicates whether units assigned to this property will have a separate secret for a separate guest network. This value may not be changed once the first unit is assigned to this property.
ssids	Array<String >	No	No	Yes	This is the list of ssids that are available to this property by means of the DPSK pool that this property is assigned to.
managementName	String	Yes	sortBy, like	Yes	Name that will be assigned in all email and SMS communications.
managementPhone	String	Yes	sortBy, like	Yes	Phone that will be assigned in all email and SMS communications.
managementEmail	String	Yes	sortBy, like	Yes	Email that will be assigned in all email and SMS communications
tenantPortalHelpText	String	Yes	Neither	Yes	Help text that will be provided to users of the tenant portal.
tenantPortalAnnouncements	String	Yes	Neither	Yes	Announcements that will be provided to users of the tenant portal.
links self, units, uiConfiguration	Link	Yes*	sortBy	Optional on create only, but not on any subsequent uses.	Self-referencing link, uiConfiguration link, and link to the list of units associated with this property.

**TABLE 107** Resource: UiConfiguration

Property Name	Type	Editable	Sort/Filter	Optional in Request/Response Body?	Description
tenantTitle	String	Yes	No	Yes	The title to use in the Tenant UI.
tenantSubtitle	String	Yes	No	Yes	The subtitle to use in the Tenant UI.
mainColor	String	Yes	No	Yes	The main color is used for the main header and any buttons or links. White text will be used on top of this color.
accentColor	String	Yes	No	Yes	The accent color is used for sub-headers and borders.
separatorColor	String	Yes	No	Yes	The separator color is used for lines in between rows of data.
textColor	String	Yes	No	Yes	The text color is the default text color used to display information throughout the portal.

**TABLE 107** Resource: UiConfiguration (continued)

Property Name	Type	Editable	Sort/Filter	Optional in Request/Response Body?	Description
logoFileName	String	NO	No	Yes	The name of the logo file, if one has been uploaded. This will be updated when the logo file is changed via the logo file link.
links					logoFile, self, and property

## Properties URIs and Actions

The following table indicates the URIs that you can append to the root URI, along with the actions you can take, and possible return codes you can receive.

**TABLE 108** Property URIs and Actions

URI	Action	Description	Return Codes
/properties/{guid}	GET	Returns details about the specified property.	404 - Not found 401 - Unauthorized 200 - OK
/properties/{guid}/uiConfiguration	GET	Returns the details of the tenant portal UI configuration, such as the color scheme being used and the name of a logo file if one is being used.	404 - Not found 401 - Unauthorized 200 - OK
/properties/{guid}/uiConfiguration/styles	GET	An unauthenticated endpoint that returns a css detailing the style settings for the tenant portal: mediaType= "text/css"	404 - Not found 200 - OK
/properties/{guid}/uiConfiguration/logoFile	GET	Returns the logo file as the actual image. The response will include the file type.	404 - Not found 401 - Unauthorized 200 - OK

## Example of Using GET for Properties

This example demonstrates how to obtain information about a specific property.

**URI:**

This example uses the following URI:

```
https://Jeff245.cloudpath.net/admin/rest/tenant/yRCjJObWR6ER/properties/Property-afaccd8-5e39-41ce-9098-9747cc38aaa0
```

where:

- https://Jeff245.cloudpath.net/admin/rest/tenant is the root URI of the Cloudpath system being used (must include https, as shown)
- yRCjJObWR6ER is an example of an API key generated from the **Configuration > API Keys** section of the Cloudpath UI
- Property-afaccd8-5e39-41ce-9098-9747cc38aaa0 is the GUID of the specific property.

**Request Headers:**

The following table shows the required request headers for this URI example, with an example value of an active token that must be pasted into the Authorization header value:

**TABLE 109** Request Headers

Key	Value
Content-type	application/json
Authorization	eyJhbGciOiJIUzI1NiJ9.eyJzdWiiOiBcGFydG1lbnQgMSlmlmFjY2Vzc1Rva2VuljoiWkFZZGxMM0ciLCJwcm9wZXJ0eUd1aWQiOiJQcm9wZXJ0eS1hZmFjY2RmOC01ZTM5LTQxY2UtOTA5OC05NzQ3Y2MzOGFhYTAiLCJ1bmI0R3VpZCI6IlVuaXQtZjU5ZjJjOTMtNjc4Ni00ZDhlLWFKYWQtMmU0NGQzM2RmMzk5IiwiaXBP52V5ljoieVJDakpPYldSNkVSlvliwiaWF0IjoxNjE0MTMwNjg2L2JleHAI0jE2MTQxMzA5ODZ9.ZO1NsBYwKDLCCHgQPKZI493oHoJakQtzpq5KgMEx0-o

**Request Body:**

None required.

**Action:**

Use the **GET** action to send the request.

**Response Body:**

Once the request is sent, you will receive a "Status: 200 OK" if the GET is successful. The response body provides information about the requested property.

```
{
  "guid": "Property-afaccdf8-5e39-41ce-9098-9747cc38aaa0",
  "name": "Building 1",
  "address": "",
  "description": "",
  "enforceMaxUnits": false,
  "maxUnits": 0,
  "allowSeparateGuestSecret": true,
  "ssids": [
    "SSID20",
    "SSID19"
  ],
  "managementName": "J. Smith",
  "managementPhone": "0005550100",
  "managementEmail": "js@smith.com",
  "tenantPortalHelpText": "",
  "tenantPortalAnnouncements": "Pavement work happening this Tuesday.",
  "links": [
    {
      "rel": "self",
      "href": "https://jeff245.cloudpath.net/admin/rest/tenant/yRCjJOBWR6ER/properties/Property-afaccdf8-5e39-41ce-9098-9747cc38aaa0",
      "hreflang": null,
      "media": null,
      "title": null,
      "type": null,
      "deprecation": null
    },
    {
      "rel": "uiConfiguration",
      "href": "https://jeff245.cloudpath.net/admin/rest/tenant/yRCjJOBWR6ER/properties/Property-afaccdf8-5e39-41ce-9098-9747cc38aaa0/uiConfiguration",
      "hreflang": null,
      "media": null,
      "title": null,
      "type": null,
      "deprecation": null
    }
  ]
}
```

## Tenant Portal Units

You can use tenant portal API calls to obtain information about existing units or to update details about a unit to which you have been authenticated by using an apiHashSecret associated with that unit to obtain your authorization token.

The following table lists the properties that can be used in the body of a units-related request and/or are provided in the response body. (In the "Optional" column, if a default value is applicable, it is listed in angle brackets (< >).

**TABLE 110** Resource: Unit

Property Name	Type	Editable	Sort/Filter	Optional in Request/Response Body?	Description
guid	String	No	Yes	No	The unique identifier for this unit.
number	String	Yes	Yes	No	The display name for this unit; must be unique.
description	String	Yes	Yes	yes	A description of the unit.
status	String <Enum>	Yes	Yes	Yes	Can be changed to reset the account access token only: "TOKEN_RESET"
secret	String	Yes	No	No	The current secret that is used for tenant devices. A request for a null or empty string is ignored.
guestSecret	String	Yes	No	Yes	The current secret that is used for guest devices in the unit. If the unit supports guest devices, this must be provided. However, if this property is provided but guest devices are not supported for this unit, this value is ignored. A request for a null or empty string is also ignored.
maxDeviceCount	int	Yes	no	Yes	The maximum number of devices permitted for this unit.
guestMaxDeviceCount	int	Yes	no	Yes	The maximum number of guest devices permitted for this unit.
contact (embedded)	Contact <Object>	Yes	Neither	Yes	Contact information for this unit. For a definition of the Contact resource, see <a href="#">Table 62</a> on page 79. All "contact" properties can be set from this URI.
links	Link	No	No	Yes	Contains the following link as hrefs for use in other API calls: <ul style="list-style-type: none"> <li>• Self-referencing link</li> <li>• Property link</li> <li>• Tenant portal link</li> <li>• Links to associated devices</li> </ul>

## Units URIs and Actions

The following table indicates the URIs that you can append to the root URI, along with the actions you can take, and possible return codes you can receive.

**TABLE 111** Units URIs and Actions

URI	Action	Description	Return Codes
/properties/{prop_guid}/units/login	POST	This URI is required to obtain an authorization token that needs to be included in the Request header of all tenant portal APIs. For instructions, refer to <a href="#">Tenant Portal API Requirements</a> on page 123.	401 - Unauthorized 200 - OK



**TABLE 111** Units URIs and Actions (continued)

URI	Action	Description	Return Codes
/properties/{prop_guid}/units/{guid}	GET	Returns details about the specified unit.	401 - Unauthorized 200 - OK
	PUT	Updates details about the unit. If the passphrase or unit name are null, a "409 - Conflict" error is returned.	409 - Conflict 401 - Unauthorized 200 - OK

## Example of Using GET for Units

This example demonstrates how to obtain information about a specified unit within a property.

### URI:

This example uses the following URI:

```
https://Jeff245.cloudpath.net/admin/rest/tenant/yRCjJObWR6ER/properties/Property-afaccdf8-5e39-41ce-9098-9747cc38aaa0/units/Unit-f59f2c93-6786-4d8e-adad-2e44d33df399
```

where:

- https://Jeff245.cloudpath.net/admin/rest/tenant is the root URI of the Cloudpath system being used (must include https, as shown)
- yRCjJObWR6ER is an example of an API key generated from the **Configuration > API Keys** section of the Cloudpath UI
- Property-afaccdf8-5e39-41ce-9098-9747cc38aaa0 is the GUID of the property.
- Unit-f59f2c93-6786-4d8e-adad-2e44d33df399 is the GUID of the unit.

### Request Headers:

The following table shows the required request headers for this URI example, with an example value of an active token that must be pasted into the Authorization header value:

**TABLE 112** Request Headers

Key	Value
Content-type	application/json
Authorization	eyJhbGciOiJIUzI1NiJ9.eyJzdWUiOiJhcGFydG1lbnQgMSIsImFjY2Vzc1Rva2VuljoiWkFZZGxMM0ciLCJwcm9wZXJ0eUd1aWQiOiJQcm9wZXJ0eS1hZmFjY2RmOC01ZTM5LTQxY2UtOTA5OC05NzQ3Y2MzOGFhYTAiLCJ1bmI0R3VpZCI6IlVuaXQtZjU5ZjJjOTMtNjc4Ni00ZDhlLWFKYVYwQmMmU0NGQzM2RmMzk5IiwiaXNpS2V5IjoieVJDakpPYldSNkVSlwVWV0IjoxNjE0MTQ5MTg5LClleHAiOiJlE2MTQxNDk0ODI9.nirUAxLkinvXRZzlTSjbpPq4vSdB1OiiSPoVDsnVwho

### Request Body:

None required.

### Action:

Use the **GET** action to send the request.

### Response Body:

Once the request is sent, you will receive a "Status: 200 OK" if the GET is successful. The response body provides information about the specified unit.

```
{
  "guid": "Unit-f59f2c93-6786-4d8e-adad-2e44d33df399",
  "number": "Apartment 1",
  "description": ""
}
```

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```
"status": "ACTIVE",
"secret": "khqmiogxzjn",
"guestSecret": "oxjqogvhnw",
"contact": {
  "contactName": "Andy Jones",
  "phoneNumber": "000-555-0101",
  "email": "aj@jones.com",
  "links": [
    {
      "rel": "smsCountryCode",
      "href": "https://jeff245.cloudpath.net/admin/apiv2/yRCjJObWR6ER/system/smsCountryCodes/
12310",
      "hreflang": null,
      "media": null,
      "title": null,
      "type": null,
      "deprecation": null
    }
  ]
},
"links": [
  {
    "rel": "property",
    "href": "https://jeff245.cloudpath.net/admin/rest/tenant/yRCjJObWR6ER/properties/Property-
afaccdf8-5e39-41ce-9098-9747cc38aaa0",
    "hreflang": null,
    "media": null,
    "title": null,
    "type": null,
    "deprecation": null
  },
  {
    "rel": "self",
    "href": "https://jeff245.cloudpath.net/admin/rest/tenant/yRCjJObWR6ER/properties/Property-
afaccdf8-5e39-41ce-9098-9747cc38aaa0/units/Unit-f59f2c93-6786-4d8e-adad-2e44d33df399",
    "hreflang": null,
    "media": null,
    "title": null,
    "type": null,
    "deprecation": null
  },
  {
    "rel": "devices",
    "href": "https://jeff245.cloudpath.net/admin/rest/tenant/yRCjJObWR6ER/properties/Property-
afaccdf8-5e39-41ce-9098-9747cc38aaa0/units/Unit-f59f2c93-6786-4d8e-adad-2e44d33df399/devices?type",
    "hreflang": null,
    "media": null,
    "title": null,
    "type": null,
    "deprecation": null
  },
  {
    "rel": "tenantPortal",
    "href": "https://jeff245.cloudpath.net/tenant?&auth=CPNENCv2%3ABC%7CD0A49F55-2B80-4D47-9A90-
BC94F5ACF433%7CdhZlzfqlYWsUKP9hNBIGeA%3D%3D%3ADRG5DkqlW%2BnpEjT0Hjfosw%3D%3D&property=Property-
afaccdf8-5e39-41ce-9098-9747cc38aaa0&api=yRCjJObWR6ER",
    "hreflang": null,
    "media": null,
    "title": null,
    "type": null,
    "deprecation": null
  }
]
}
```

## Tenant Portal Unit Device

You can use tenant portal API calls to obtain information about unit devices, to make changes to devices, or to delete devices.

The following table lists the properties that can be used in the body of a device-related request and/or are provided in the response body. (In the "Optional" column, if a default value is applicable, it is listed in angle brackets (< >).

**TABLE 113** Resource: UnitDevice

Property Name	Type	Editable	Sort/Filter	Optional in Request/Response Body?	Description
guid	String	No	No	No	The unique identifier for this device
type	String <Enum>	No	Yes	No	The type of device, either "TENANT" or "GUEST"; as a query parameter: devices?type=TENANT
displayName	String	Yes	No	yes	The display name for this device.
description	String	Yes	No	yes	The description of the device.
macAddress	String	No	No	No	The MAC address for this device.

## Units URIs and Actions

The following table indicates the URIs that you can append to the root URI, along with the actions you can take, and possible return codes you can receive.

**TABLE 114** Units URIs and Actions

URI	Action	Description	Return Codes
/properties/{prop_guid}/units/{guid}/devices	GET	Returns the list of devices that belong to the unit (and guest if you have a "guest dpsk"). This is only for the tenant portal. To manage these via the Cloudpath ES authentication, use the DPSK API directly. The unit provides links to the dpsks.	404 - Not found 401 - Unauthorized 200 - OK
/properties/{prop_guid}/units/{guid}/devices/{deviceGuid}	GET	Returns details about the specified device that belongs to the unit (and guest if you have a "guest dpsk"). This is only for the tenant portal. To manage these via Cloudpath ES authentication, use the DPSK API directly. The unit provides links to the dpsks.	404 - Not found 401 - Unauthorized 200 - OK
/properties/{prop_guid}/units/{guid}/devices/{deviceGuid}	PUT	Only supports changing the display name and description on the device.	404 - Not found 401 - Unauthorized 200 - OK
/properties/{prop_guid}/units/{guid}/devices/{deviceGuid}	DELETE	Deletes the specified device that belongs to the unit or guest. This is only for the tenant portal.	

## Example of Using GET for Unit Devices

This example demonstrates how to obtain information about all devices within one property.

### URI:

This example uses the following URI:

```
https://Jeff245.cloudpath.net/admin/rest/tenant/yRCjJObWR6ER/properties/Property-afaccdf8-5e39-41ce-9098-9747cc38aaa0/units/Unit-f59f2c93-6786-4d8e-adad-2e44d33df399/devices
```

## Tenant Portal APIs

### Tenant Portal Unit Device

where:

- <https://Jeff245.cloudpath.net/admin/rest/tenant> is the root URI of the Cloudpath system being used (must include https, as shown)
- yRCjObWR6ER is an example of an API key generated from the **Configuration > API Keys** section of the Cloudpath UI
- Property-afaccdf8-5e39-41ce-9098-9747cc38aaa0 is the GUID of the property.
- Unit-f59f2c93-6786-4d8e-adad-2e44d33df399 is the GUID of the unit from which you want to obtain a list of devices.

#### Request Headers:

The following table shows the required request headers for this URI example, with an example value of an active token that must be pasted into the Authorization header value:

**TABLE 115** Request Headers

Key	Value
Content-type	application/json
Authorization	eyJhbGciOiJIUzI1NiJ9.eyJzdWIiOiJCbGFydG1lbnQgMSlmlmFjY2Vzc1Rva2VuljoiWkFZZGxMM0ciLCJwcm9wZXJ0eUd1aWQiOiJQcm9wZXJ0eS1hZmFjY2RmOC01ZTM5LTQxY2U0TA5OC05NzQ3Y2MzOGFhYTAiLCJ1bml0R3VpZCI6IlVuaXQtZjU5ZjJOTmNjc4Ni00ZDhlLWFKYWQtMmU0NGQzM2RmMzk5IiwiaXBP52V5JioieVJDakpPYldSNkVSIiwiaWF0IjoxNjE0MTEwMDUxMDE0LjE4IiwiaWF0IjE2MTQxNTEzZzh9.wJpeI8zW7FGynjfFGel1gpjKev_ug217WQBIFziXcls

#### Request Body:

None required.

#### Action:

Use the **GET** action to send the request.

#### Response Body:

Once the request is sent, you will receive a "Status: 200 OK" if the GET is successful. The response body provides information about all existing devices in the unit that was specified; in this case only one device belonged to the unit, as shown below.

```
{
  "page": {
    "page": 1,
    "pageSize": 1,
    "totalCount": 1
  },
  "contents": [
    {
      "guid": "AccountDpskDevice-1c41324f-28e8-41e9-a74c-09d2db59deac",
      "type": "TENANT",
      "displayName": "Andy's laptop",
      "macAddress": "112233445566",
      "description": "",
      "links": [
        {
          "rel": "units",
          "href": "https://jeff245.cloudpath.net/admin/rest/tenant/yRCjObWR6ER/properties/Property-afaccdf8-5e39-41ce-9098-9747cc38aaa0/units/Unit-f59f2c93-6786-4d8e-adad-2e44d33df399",
          "hreflang": null,
          "media": null,
          "title": null,
          "type": null,
          "deprecation": null
        },
        {
          "rel": "self",
          "href": "https://jeff245.cloudpath.net/admin/rest/tenant/yRCjObWR6ER/properties/Property-afaccdf8-5e39-41ce-9098-9747cc38aaa0/units/Unit-f59f2c93-6786-4d8e-adad-2e44d33df399/devices/AccountDpskDevice-1c41324f-28e8-41e9-a74c-09d2db59deac",
          "hreflang": null,
          "media": null,

```

```
        "title": null,  
        "type": null,  
        "deprecation": null  
    }  
  ]  
}
```

