

Cloudpath Enrollment System REST API User Guide, 5.12

Supporting Cloudpath Software Release 5.12

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Contacting RUCKUS Customer Services and Support

The Customer Services and Support (CSS) organization is available to provide assistance to customers with active warranties on their RUCKUS products, and customers and partners with active support contracts.

For product support information and details on contacting the Support Team, go directly to the RUCKUS Support Portal using <https://support.ruckuswireless.com>, or go to <https://www.ruckusnetworks.com> and select **Support**.

What Support Do I Need?

Technical issues are usually described in terms of priority (or severity). To determine if you need to call and open a case or access the self-service resources, use the following criteria:

- Priority 1 (P1)—Critical. Network or service is down and business is impacted. No known workaround. Go to the **Open a Case** section.
- Priority 2 (P2)—High. Network or service is impacted, but not down. Business impact may be high. Workaround may be available. Go to the **Open a Case** section.
- Priority 3 (P3)—Medium. Network or service is moderately impacted, but most business remains functional. Go to the **Self-Service Resources** section.
- Priority 4 (P4)—Low. Requests for information, product documentation, or product enhancements. Go to the **Self-Service Resources** section.

Open a Case

When your entire network is down (P1), or severely impacted (P2), call the appropriate telephone number listed below to get help:

- Continental United States: 1-855-782-5871
- Canada: 1-855-782-5871
- Europe, Middle East, Africa, Central and South America, and Asia Pacific, toll-free numbers are available at <https://support.ruckuswireless.com/contact-us> and Live Chat is also available.
- Worldwide toll number for our support organization. Phone charges will apply: +1-650-265-0903

We suggest that you keep a physical note of the appropriate support number in case you have an entire network outage.

Self-Service Resources

The RUCKUS Support Portal at <https://support.ruckuswireless.com> offers a number of tools to help you to research and resolve problems with your RUCKUS products, including:

- Technical Documentation—<https://support.ruckuswireless.com/documents>
- Community Forums—<https://community.ruckuswireless.com>
- Knowledge Base Articles—<https://support.ruckuswireless.com/answers>
- Software Downloads and Release Notes—https://support.ruckuswireless.com/#products_grid
- Security Bulletins—<https://support.ruckuswireless.com/security>

Using these resources will help you to resolve some issues, and will provide TAC with additional data from your troubleshooting analysis if you still require assistance through a support case or RMA. If you still require help, open and manage your case at https://support.ruckuswireless.com/case_management.

Document Feedback

RUCKUS is interested in improving its documentation and welcomes your comments and suggestions.

You can email your comments to RUCKUS at #Ruckus-Docs@commscope.com.

When contacting us, include the following information:

- Document title and release number
- Document part number (on the cover page)
- Page number (if appropriate)

For example:

- RUCKUS SmartZone Upgrade Guide, Release 5.0
- Part number: 800-71850-001 Rev A
- Page 7

RUCKUS Product Documentation Resources

Visit the RUCKUS website to locate related documentation for your product and additional RUCKUS resources.

Release Notes and other user documentation are available at <https://support.ruckuswireless.com/documents>. You can locate the documentation by product or perform a text search. Access to Release Notes requires an active support contract and a RUCKUS Support Portal user account. Other technical documentation content is available without logging in to the RUCKUS Support Portal.

White papers, data sheets, and other product documentation are available at <https://www.ruckusnetworks.com>.

Online Training Resources

To access a variety of online RUCKUS training modules, including free introductory courses to wireless networking essentials, site surveys, and products, visit the RUCKUS Training Portal at <https://commscopeuniversity.myabsorb.com/>. The registration is a two-step process described in this [video](#). You create a CommScope account and then register for, and request access for, CommScope University.

Document Conventions

The following table lists the text conventions that are used throughout this guide.

TABLE 1 Text Conventions

Convention	Description	Example
monospace	Identifies command syntax examples	<code>device(config)# interface ethernet 1/1/6</code>
bold	User interface (UI) components such as screen or page names, keyboard keys, software buttons, and field names	On the Start menu, click All Programs .
<i>italics</i>	Publication titles	Refer to the <i>RUCKUS Small Cell Release Notes</i> for more information.

Notes, Cautions, and Safety Warnings

Notes, cautions, and warning statements may be used in this document. They are listed in the order of increasing severity of potential hazards.

NOTE

A NOTE provides a tip, guidance, or advice, emphasizes important information, or provides a reference to related information.

ATTENTION

An ATTENTION statement indicates some information that you must read before continuing with the current action or task.



CAUTION

A CAUTION statement alerts you to situations that can be potentially hazardous to you or cause damage to hardware, firmware, software, or data.



DANGER

A DANGER statement indicates conditions or situations that can be potentially lethal or extremely hazardous to you. Safety labels are also attached directly to products to warn of these conditions or situations.

Command Syntax Conventions

Bold and italic text identify command syntax components. Delimiters and operators define groupings of parameters and their logical relationships.

Convention	Description
bold text	Identifies command names, keywords, and command options.
<i>italic text</i>	Identifies a variable.
[]	Syntax components displayed within square brackets are optional. Default responses to system prompts are enclosed in square brackets.
{x y z}	A choice of required parameters is enclosed in curly brackets separated by vertical bars. You must select one of the options.
x y	A vertical bar separates mutually exclusive elements.
< >	Nonprinting characters, for example, passwords, are enclosed in angle brackets.
...	Repeat the previous element, for example, <i>member[member...]</i> .
\	Indicates a "soft" line break in command examples. If a backslash separates two lines of a command input, enter the entire command at the prompt without the backslash.

What's New in This Document

This release adds the following:

- Additional APIs for network segmentation groups. Refer to [Network Segmentation Groups](#) on page 156.
- Removal of API keys in tenant portal APIs. The API key is no longer required.
- Updated preface

Cloudpath REST API Basics

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Overview

Cloudpath uses REST API, which is a RESTful API designed for external consumer use, and uses Json Web Tokens for authentication (and allows for auditing). There are three categories of Cloudpath APIs:

- [Core Cloudpath APIs](#) on page 19 - These are APIs run by a Cloudpath administrator. The Cloudpath administrator also creates the tenant portal and management portal listed below. Those portals can be created either via the Cloudpath user interface or by using APIs.
- [Tenant Portal APIs](#) on page 181 - These APIs can be run by the tenant of a property or by the Cloudpath administrator.
- [Property Management APIs](#) on page 193 - These APIs can be run by a member of the property personnel staff (such as a front-desk worker) or by the Cloudpath administrator.

NOTE

This is a different set of APIs from [Management Portal APIs](#) on page 141. "Management Portal APIs" are part of the "Core Cloudpath APIs" and are used by a Cloudpath administrator to create the management portal.

NOTE

Basic knowledge of REST API 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 18.

Root URIs Used For Cloudpath APIs:

The various root URIs are of the following form:

- Core Cloudpath APIs: `<Cloudpath FQDN>/admin/publicApi`

NOTE

The following root URI has been used prior to Cloudpath 5.9 (and still works in 5.9), but is deprecated in releases later than:
`<Cloudpath FQDN>/admin/apiv2/{APIKey}`

- Tenant Portal APIs: `<Cloudpath FQDN>/admin/rest/tenant/`
- Property Management APIs: `<Cloudpath FQDN>/admin/rest/propertyMgmtPortals/{mgmt_portal_guid}`

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.

Security

The Cloudpath REST APIs use Json Web Tokens (JWT) to secure all endpoints.

The user calls ".../admin/publicApi/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/publicApi/token" endpoint provides basic information about the token's expiration.

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 2 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. NOTE Not required for obtaining a token for the tenant portal APIs. Refer to Tenant Portal API Requirements on page 181.
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.
serverVersion	String	No	Neither	Yes	The server version.

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 3 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 181.

URI:

This example uses the following URI:

```
https://Jeff245.cloudpath.net/admin/publicApi/token
```

where https://Jeff245.cloudpath.net/admin/publicApi is the root URI of the Cloudpath system being used (must include https, as shown).

Request Headers:

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

TABLE 4 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.eyJzdWIiOiJqZWZmLnJob2RpbhcnJpcy5jb20iLCJyb2xlUGsiOiIyMTAwMCIzImFjY291bnRBZG1pb1BrIjoiImIsImFwaUtleSI6IkhOV2dNSG93cERCNCIsIm1hdCI6MTU3NTQ4NjExMSwiZXhwIjoxNTc1NDg2NDExfQ.JwBWDgj_K7jP1kDvVU8aq_vmNulsdx2FD_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 an active token with all other requests.

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 51

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 58

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 "orderBy". 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 and property management APIs. Refer to those sections of this guide for information on root URIs.

```
https://cloudpathServer/admin/publicApi/resource?orderBy=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 65.

Query Operators

The following query operators are supported:

TABLE 5 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/publicApi/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 60.

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 6 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 7 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 /token 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 /token .
409-	"Conflict" - Occurs when the request itself is valid, but the data in the request causes a conflict with existing data. An common example is if the name is not unique.
415	"Unsupported Media Type" - the REST APIs support only JSON.
4***, 500, 503	Several other errors might occur. The error response should provide additional details as to the issue.

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Authentication Servers and Related Resources

Authentication Servers

You can use REST API 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 8 Resource: **Authentication Server**

Property Name	Type	Editable	Sort/Filter	Optional in Request/Response Body?	Description
guid	String	No	orderBy, like	No	The unique identifier for this authentication server.
name	String	Yes	orderBy, 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	orderBy	No	Indicates if this authentication server should allow administration login to Cloudpath.
adminLoginRegex	String	Yes	orderBy, 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	orderBy,	No	Indicates if this authentication server should allow users to log into the sponsor portal.
useVlanRange	Boolean	Yes	orderBy	No	Indicates whether to allow a user on this authentication server to be assigned a configured auto vlan.

Core Cloudpath APIs

Authentication Servers and Related Resources

TABLE 8 Resource: Authentication Server (continued)

Property Name	Type	Editable	Sort/Filter	Optional in Request/Response Body?	Description
links[]	Link array	No	No	No	Includes a self-referencing link, and links to associated users and groups.

TABLE 9 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 10 Resource: Detail

Property Name	Type	Editable	Sort/Filter	Optional in Request/Response Body?	Description
type	String <ENUM>	No	orderBy, 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.

TABLE 10 Resource: Detail (continued)

Property Name	Type	Editable	Sort/Filter	Optional in Request/Response Body?	Description
customOauth	Object <Embedded>	No	See resource.	Yes; can be combined with Facebook, Google and LinkedIn.	The details needed to use a custom oauth.

TABLE 11 Resource: ldap

Property Name	Type	Editable	Sort/Filter	Optional in Request/Response Body?	Description
host	String	Yes	orderBy, like	No	The DNS/IP of the Active Directory server. For example: ldap://172.16.4.2
svrDistinguishedName	String	Yes	orderBy, 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 OCSP 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	orderBy, 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

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Authentication Servers and Related Resources

TABLE 11 Resource: ldap (continued)

Property Name	Type	Editable	Sort/Filter	Optional in Request/Response Body?	Description
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 12 Resource: saml

Property Name	Type	Editable	Sort/Filter	Optional in Request/Response Body?	Description
ipEntityId	String	Yes	orderBy, 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	orderBy, 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	orderBy, 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	orderBy, 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
socketTimeout	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.

TABLE 12 Resource: saml (continued)

Property Name	Type	Editable	Sort/Filter	Optional in Request/Response Body?	Description
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.
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 13 Resource: radius

Property Name	Type	Editable	Sort/Filter	Optional in Request/Response Body?	Description
ipAddress	String	Yes	orderBy, like	NO	The DNS hostname (radius.company.com) or IP address of the RADIUS server.
port	number	Yes	orderBy	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	orderBy, 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.

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Authentication Servers and Related Resources

TABLE 14 Resource: activeDirectory

Property Name	Type	Editable	Sort/Filter	Optional in Request/Response Body?	Description
defaultDomain	String	Yes	orderBy, 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	orderBy, like	No	The DNS/IP of the Active Directory server. Example: ldap://hostabc.example.com or ldap://172.16.4.2 . Use the fully qualified DNS name of the AD server for PEAP authentication.
distinguishedName	String	Yes	orderBy, like	No	The DN of the Active Directory domain. Example: dc=test,dc=sample,dc=local
searchBasis	String <Enum>	Yes	none	No, defaults to "SAM"	The attribute in Active Directory against which the username gets compared: SAM, UPN, NONE
checkOcsp	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 checkOcsp=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 checkOcsp=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 15 Resource: facebookOauth

Property Name	Type	Editable	Sort/Filter	Optional in Request/Response Body?	Description
appId	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 16 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 17 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 18 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: https://www.googleapis.com/oauth2/v4/token .
authorizeUrl	String	Yes	none	Yes	The authorize URL for the OAuth server. For example, the Google authorize URL is: https://accounts.google.com/o/oauth2/auth .
dataUrl	String	Yes	none	Yes	The data URL for the OAuth server. For example, the Google URL is: https://www.googleapis.com/oauth2/v2/userinfo .
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: profile email .

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 19 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:

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Authentication Servers and Related Resources

This example uses the following URI:

```
https://Jeff245.cloudpath.net/admin/publicApi/authenticationServers
```

where `https://Jeff245.cloudpath.net/admin/publicApi` is the root URI of the Cloudpath system being used (must include `https`, as shown).

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 20 Request Headers

Key	Value
Content-type	application/json
Authorization	eyJhbGciOiJIUzI1NiJ9.eyJzdWUiOiJqZWZmLnJob2RpZUBjb21tc2NvcGUuY29tIiwicm9sZVBrIjoiaWJEWMDAilCJhY2NvdW50QWRtaW5Qayl6ljIiILCJhcGILZXXkiOiJaV2NjTGpQZUdZMGUilCJpYXQiOiJlNzU1NzUxNTcslmV4cC16MTU3NTU3NTQ1N30.2q4KTyDUevkAAz7mJyp529Be1-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": "Sample Test AD",
      "detail": {
        "type": "ACTIVE_DIRECTORY",
        "activeDirectory": {
          "defaultDomain": "demo.sample.local",
          "host": "ldaps://192.168.0.1",
          "distinguishedName": "dc=demo,dc=sample,dc=local",
          "searchBasis": "SAM",
          "checkOcsf": false,
          "ocspStatusFrequency": 86400000,
          "bindUsername": "",
          "bindPassword": "",
          "enabledForPeap": false
        }
      },
      "adminLogin": false,
      "sponsorLogin": true,
      "useVlanRange": false,
      "adminLoginRegex": "",
      "links": [
        {
          "rel": "self",
          "href": "https://jeff245.cloudpath.net/admin/publicApi/authenticationServers/1",
          "hreflang": null,
          "media": null,
          "title": null,
        }
      ]
    }
  ]
}
```

```

        "type": null,
        "deprecation": null
    },
    {
        "rel": "groups",
        "href": "https://jeff245.cloudpath.net/admin/publicApi/authenticationServers/1/groups?
page=1&pageSize=10{&filter,orderBy}",
        "hreflang": null,
        "media": null,
        "title": null,
        "type": null,
        "deprecation": null
    },
    {
        "rel": "users",
        "href": "publicApi/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/publicApi/authenticationServers/2",
            "hreflang": null,
            "media": null,
            "title": null,
            "type": null,
            "deprecation": null
        },
        {
            "rel": "groups",
            "href": "https://jeff245.cloudpath.net/admin/publicApi/authenticationServers/2/groups?
page=1&pageSize=10{&filter,orderBy}",
            "hreflang": null,
            "media": null,
            "title": null,
            "type": null,
            "deprecation": null
        },
        {
            "rel": "users",
            "href": "/publicApi/authenticationServers/2/users",
            "hreflang": null,
            "media": null,
            "title": null,
            "type": null,
            "deprecation": null
        }
    ]
}
]
}

```

Authentication Groups

You can use REST API 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 21 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	orderBy, like	No	The unique reference name of the authentication group.
cn	String	No	orderBy, 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	orderBy, 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	orderBy, 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 22 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 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 23 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	orderBy, like	No	The unique reference name for this user.
status	enum <String>	Yes	orderBy, 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	orderBy, like	No	Provided by the authentication server during the authentication process.
lastName	String	No	orderBy, like	No	Provided by the authentication server during the authentication process.
email	String	No	orderBy, like	No	Provided by the authentication server during the authentication process.
commonName	String	No	orderBy, like	No	Provided by the authentication server during the authentication process.
distinguishedName	String	No	orderBy, like	No	Provided by the authentication server during the authentication process.
officeName	String	No	orderBy, like	No	Provided by the authentication server during the authentication process.
company	String	No	orderBy, like	No	Provided by the authentication server during the authentication process.
department	String	No	orderBy, like	No	Provided by the authentication server during the authentication process.
ou	String	No	orderBy, like	No	Provided by the authentication server during the authentication process.
city	String	No	orderBy, like	No	Provided by the authentication server during the authentication process.
state	String	No	orderBy, like	No	Provided by the authentication server during the authentication process.
country	String	No	orderBy, like	No	Provided by the authentication server during the authentication process.
oauthType	Enum <String>	No	orderBy, like	No	Indicates the type of authentication that this user followed: ACTIVE_DIRECTORY, LDAP, FACEBOOK, LINKEDIN, GOOGLE, SAML, or CUSTOM
lastPeapAuthDate	DateTime	No	orderBy,	Yes	The most recent date that this user authenticated through PEAP.
lastAssignedPolicy	String	No	orderBy, like	No	The name of the policy most recently applied to this user.
automaticVlan	Long	No	orderBy,	No	The automatic vlan assigned to the user if enabled on the authentication server.

TABLE 23 Resource: Users (continued)

Property Name	Type	Editable	Sort/Filter	Optional in Request/Response Body?	Description
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 24 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 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 25 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.

TABLE 25 Resource: RadiusAttributeGroup (continued)

Property Name	Type	Editable	Filter/Sort	Optional in Request/Response Body?	Description
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.
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 Configuration > Policies > Radius Attribute Groups 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 26 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 27 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
/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/publicApi/radiusAttributeGroups
```

where https://Jeff243.cloudpath.net/admin/publicApi is the root URI of the Cloudpath system being used (must include https, as shown).

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 28 Request Headers

Key	Value
Content-type	application/json
Authorization	eyJhbGciOiJIUzI1NiJ9.eyJzdWiiOiJqZWZmLnJob2RpZUBjb21tc2NvcGUuY29tlwicm9sZVBrIjoiMjEwMDA0LjY2NvdW50QWRtaW5Qayl6IjIiLCJhcGILZXkiOiJaV2NjTjGpQZUdZMGUilCjYXQjOjE1NzU1NzUxNTcslmV4cCl6MTU3NTU3NTQ1N30.2q4KTyDUevkAAz7mJyp529Be1-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/publicApi/radiusAttributeGroups/1",
      "hreflang": null,
      "media": null,
      "title": null,
      "type": null,
      "deprecation": null
    }
  ]
}
```

RADIUS Clients

You can use REST API 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 29 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.

TABLE 29 Resource: RADIUS Clients (continued)

Property Name	Type	Editable	Filter/Sort	Optional in Request/Response Body?	Description
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 30 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"> • COLON_6_GROUPS (XX:XX:XX:XX:XX:XX) • HYPHEN_2_GROUPS (XXXXXX-XXXXXX) • HYPHEN_6_GROUPS (XX-XX-XX-XX-XX-XX) • DOT (XXXX.XXXX.XXXX) • NONE(XXXXXXXXXXXX)
disconnectAttributes	List	Yes	Neither	Yes	A list of additional attributes to apply to radius configurations during the disconnect from the RADIUS client. Refer to Table 26 on page 31.
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 31 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 32 RADIUS Clients

URI	Action	Description	Return Codes
/radius/clients	GET	Returns the list of RADIUS clients that are defined.	401 - Unauthorized

TABLE 32 RADIUS Clients (continued)

URI	Action	Description	Return Codes
/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/publicApi/radius/clients/
```

where https://Jeff243.cloudpath.net/admin/publicApi is the root URI of the Cloudpath system being used (must include https, as shown).

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 33 Request Headers

Key	Value
Content-type	application/json
Authorization	eyJhbGciOiJIUzI1NiJ9.eyJzdWUiOiJqZWZmLnJob2RpZUBjb21tc2NvcGUuY29tIiwicm9sZVBrIjoiaWJwMDAiLCJhY2NvdW50QWRtaW5QayI6IjIiLCJhcGILZXkiOiJaV2NjTGpQZUdZMGUilCJpYXQiOjE1NzU1NzUxNTcslmV4Cl6MTU3NTU3NTQ1N30.2q4KTyDUevkAAz7mJyp529Be1-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/publicApi/radius/clients/1",
    "hreflang": null,
    "media": null,
    "title": null,
    "type": null,
    "deprecation": null
  }
]
}

```

Policies

You can use REST API 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 34 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	orderBy, like	No	The display name for this policy; must be unique.
description	String	Yes	orderBy, 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. NOTE 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 35 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.

TABLE 35 Resource: rule (continued)

Property Name	Type	Editable	Filter or Sort	Optional?	Description
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.
macAddressRegex	String	Yes	Neither	Yes	The regex of the MAC address to limit this policy. Note that, if selected and no MAC address is provided in the RADIUS request, the policy using this property will never be matched.
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	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): <pre> "links": [{ "rel": "radiusClient", "href": "https:// somehost.cp.com/radius/client/234" }] </pre> Also, refer to RADIUS Clients on page 33.

TABLE 36 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 37 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
/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/publicApi/policies
```

where `https://Jeff243.cloudpath.net/admin/publicApi` is the root URI of the Cloudpath system being used (must include `https`, as shown).

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 38 Request Headers

Key	Value
Content-type	application/json
Authorization	eyJhbGciOiJIUzI1NiJ9.eyJzdWiiOiJqZWZmLnJob2RpZUBjb21tc2NvcGUuY29tIiwicm9sZVBrIjoiMjEwMDA0LjY2NvdW50QWRtaW5QayI6IjIiLCJhcGILZXRkiOiJaV2NjTjGpQZUdZMGUilCjYXQjOjE1NzU1NzUxNTcslmV4cCl6MTU3NTU3NTQ1N30.2q4KTyDUevkAAz7mJyp529Be1-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": [],
    "macAddressRegex": "",
    "timeRange": {
      "when": "WEEKEND",
      "startTime": "07:45:00",
      "endTime": "16:15:00"
    }
  },
  "links": [
    {
      "rel": "attributeGroup",
      "href": "https://jeff243.cloudpath.net/admin/publicApi/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": "",
    "macAddressRegex": "",
    "timeRange": {
      "when": "WEEKEND",
      "startTime": "07:45:00",
      "endTime": "16:15:00"
    }
  },
  "links": [
    {
      "rel": "self",
      "href": "https://jeff243.cloudpath.net/admin/publicApi/policies/2",
      "hreflang": null,
      "media": null,
      "title": null,
      "type": null,
      "deprecation": null
    },
    {
      "rel": "attributeGroup",
      "href": "https://jeff243.cloudpath.net/admin/publicApi/radiusAttributeGroups/1",
      "hreflang": null,

```

```

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

```

DPSK Resources and URIs

DPSK Pools

You can use REST API 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 39 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 Table 25 on page 30 .
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 Table 25 on page 30 .
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 <i>true</i> to <i>false</i> disables the pool.
enforceDeviceCountLimit	Boolean	Yes	Neither	No<false>	If <i>true</i> , each DPSK is assigned a maximum device count as specified in the deviceCountLimit parameter. If <i>false</i> , an unlimited number of devices can utilize the DPSK.
enforceExpirationDate	Boolean	Yes	Neither	No <false>	If <i>true</i> , newly generated DPSKs are assigned an expiration date that is based on the creation date and the defined offset.

TABLE 39 Resource: DPSK Pools (continued)

Property Name	Type	Editable	Sort/Filter	Optional in Request/Response Body?	Description
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
expirationDateValue	Int	Yes	Neither	No <1>	Will be used if HOURS_AFTER_TIME is provided in the expirationData type
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 Table 25 on page 30 .
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 Table 25 on page 30 .
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 Table 25 on page 30 .

TABLE 39 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>NOTE 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>NOTE 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"> 1. Create one or more RADIUS attributes group to assign to a policy: RADIUS Attribute Groups on page 30 2. Create one or more policies: Policies on page 36 3. Assign one or more policies to the DSPK pool: Assigned Policies on page 74
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"> • Self referencing link • Policies link • Links to dpsks that belong to this pool

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 40 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 40 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 Table 39 and Table 26 on page 31 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/publicApi/dpskPools
```

where `https://Jeff243.cloudpath.net/admin/publicApi` is the root URI of the Cloudpath system being used (must include `https`, as shown).

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	eyJhbGciOiJIUzI1NiIsInR5cGU6IjY9LmVzdWliOiJqZWZmLnJob2RpZUBjb21tc2NvcGUuY29tIiwicm9sZVBrIjoieWMDAilCjY2NvdW50QWRtaW5Qayl6ljIiLCJhcGILZXkiOiJaV2NjTGpQZUdZMGUilCjYXQiOjE1NzU1NzUxNTcslmV4cCl6MTU3NTU3NTQ1N30u2q4KTyDUevkAAz7mJyp529Be1-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 DPSK pools in your Cloudpath system. In this example, DPSK Pool 1 is the only existing pool. The information in the response body will match the configuration of DPSK Pool 1 as specified in the UI. Any values that were not specified in the UI are the default values:

```
{
  "page": {
    "page": 1,
  }
}
```

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```
    "pageSize": 1,
    "totalCount": 1
  },
  "contents": [
    {
      "guid": "AccountDpskPool-8c95a636-59ff-4a85-alce-e2b6984f5a50",
      "displayName": "DPSK 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/publicApi/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/publicApi/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/publicApi/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/publicApi/dpskPools
```

where <https://Jeff243.cloudpath.net/admin/publicApi> is the root URI of the Cloudpath system being used (must include https, as shown).

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 42 Request Headers

Key	Value
Content-type	application/json
Authorization	eyJhbGciOiJIUzI1NiIsInR5cGU6IjY29liiwicm9sZVBrIjoieWMDAiLCJhY2NvdW50QWRtaW5QayI6IjliLCJhcGILZXRkiOiJhV2NjTGpQZUdZMGUilCjYXQjOjE1NzU1NzUxNTcslmV4cCl6MTU3NTU3NTQ1N30u2q4KTyDUevkAAz7mJyp529Be1-ip3EC8P06Xarmz5ao

Request Body:

The following is an example of a request body for creating a DSPK 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 "DSPK Pool 20" is being created with the values provided in the body.

```
{
  "displayName": "DSPK 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": "DSPK 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,
  "supportsPolicies": true,
  "defaultAccess": "ACCEPT",
  "links": [
    {
      "rel": "self",
      "href": "https://jeff243.cloudpath.net/admin/publicApi/dpskPools/AccountDpskPool-14dc1ed8-ba2a-43bd-8cad-e30dc5f20fb8",
      "hreflang": null,
    }
  ]
}
```

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```
    "media": null,
    "title": null,
    "type": null,
    "deprecation": null
  },
  {
    "rel": "dpsks",
    "href": "https://jeff243.cloudpath.net/admin/publicApi/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/publicApi/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 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 43 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	orderBy, like	No	The reference name of the item.
enrollmentUserName	String	No	orderBy, like	Yes	If the DSPK is tied to an enrollment, this is the rollupUserName for that enrollment.
thirdPartyId	String	Yes	orderBy, 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
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. NOTE This property cannot be edited when devices are associated with the DSPK (deviceCount > 0). If this field is edited while deviceCount > 0, then a "409 Conflict" message will be returned.

TABLE 43 Resource: DPSKs (continued)

Property Name	Type	Editable	Sort/Filter	Optional in Request/ Response Body?	Description
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. NOTE 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	orderBy	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.
link	Link	No	No	No	The following links are included as hrefs for use in other API calls: <ul style="list-style-type: none"> • self-referencing link • link to parent eDPSK pool • enrollment link if applicable. For information about Enrollment APIs, including DPSK enrollments, refer to Enrollments on page 113.

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 44 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 Table 43 for which properties can be edited.	200 - OK 401-Unauthorized 404 -Not Found 409 - Conflict

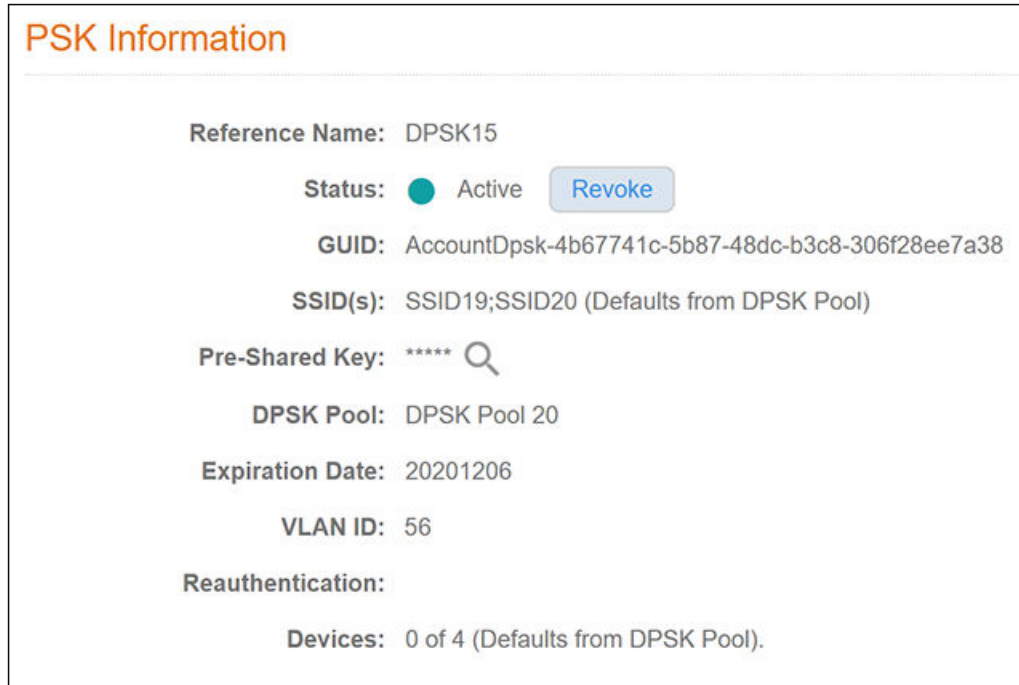
NOTE

For DPSK-related enrollment URIs, see [Enrollment URIs and Actions](#) on page 115.

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 44, 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 1 DPSK15 Information in UI Before API PUT Call



URI:

This example uses the following URI:

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

where:

- https://Jeff243.cloudpath.net/admin/publicApi is the root URI of the Cloudpath system being used (must include https, as shown)
- 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 45 Request Headers

Key	Value
Content-type	application/json
Authorization	eyJhbGciOiJIUzI1NiJ9.eyJzdWiiOiJqZWZmLnJob2Rpb21tY2NvcGUuY29tliwicm9sZVBrIjoiMjEwMDAiLCJhY2NvdW50QWRtaW5Qayl6IjIiLCJhcGILZXRkiOiJaV2NjTGpQZUdZMGUuIiJpYXQiOiJlNzU1NzUxNTcsmV4cCl6MTU3NTU3NTQ1N30.2q4KTyDUevkAAz7mJyp529Be1-ip3EC8P06Xarmz5ao

Request Body:

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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 43](#).

```
{
  "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/publicApi/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/publicApi/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/publicApi/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 2 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/publicApi/dpskPools/AccountDpskPool-14dc1ed8-ba2a-43bd-8cad-e30dc5f20fb8/dpsks

```

where:

- <https://Jeff243.cloudpath.net/admin/publicApi> is the root URI of the Cloudpath system being used (must include https, as shown)
- 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:

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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	eyJhbGciOiJIUzI1NiJ9.eyJzdWiiOiJqZWZmLnJob2RpZUBjb21tc2NvcGUuY29tliwicm9sZVBrIjoieWMDAilCjY2NvdW50QWRtaW5QayI6IjIiLiJhcGILZkxiOiJhV2NjTGpQZUdZMGUilCjYXQjOjE1NzU1NzUxNTcslmV4cCl6MTU3NTU3NTQ1N30.2q4KTyDUevkAAz7mJyp529Be1-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": "xzhjmjzdao",
      "status": "ACTIVE",
      "ssidList": [],
      "expirationDateTime": "2020-07-27T06:00:00Z",
      "useDeviceCountLimit": false,
      "deviceCountLimit": 0,
      "deviceCount": 0,
      "links": [
        {
          "rel": "self",
          "href": "https://jeff243.cloudpath.net/admin/publicApi/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/publicApi/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/publicApi/dpskPools/AccountDpskPool-14dc1ed8-ba2a-43bd-8cad-e30dc5f20fb8/dpsks/AccountDpsk-e45f6b14-2cff-4c8d-b44e-102fd67fe02c/devices"
      }
    }
  ]
}
```

```

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/publicApi/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/publicApi/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/publicApi/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/publicApi/dpskPools/
AccountDpskPool-14dc1ed8-ba2a-43bd-8cad-e30dc5f20fb8/dpsks/AccountDpsk-5ed29464-d571-48be-
a0d0-7574ab87b93d",
      "hreflang": null,

```

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```
        "media": null,
        "title": null,
        "type": null,
        "deprecation": null
    },
    {
        "rel": "parent",
        "href": "https://jeff243.cloudpath.net/admin/publicApi/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/publicApi/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/publicApi/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/publicApi/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/publicApi/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/publicApi/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/publicApi/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/publicApi/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/publicApi/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/publicApi/dpskPools/

```

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```
AccountDpskPool-14dc1ed8-ba2a-43bd-8cad-e30dc5f20fb8",
    "hreflang": null,
    "media": null,
    "title": null,
    "type": null,
    "deprecation": null
  },
  {
    "rel": "devices",
    "href": "https://jeff243.cloudpath.net/admin/publicApi/dpskPools/AccountDpskPool-14dc1ed8-ba2a-43bd-8cad-e30dc5f20fb8/dpsks/AccountDpskPool-14dc1ed8-ba2a-43bd-8cad-e30dc5f20fb8/dpsks?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/publicApi/dpskPools/AccountDpskPool-14dc1ed8-ba2a-43bd-8cad-e30dc5f20fb8/dpsks
```

where:

- <https://Jeff243.cloudpath.net/admin/publicApi> is the root URI of the Cloudpath system being used (must include https, as shown)
- 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 47 Request Headers

Key	Value
Content-type	application/json
Authorization	eyJhbGciOiJIUzI1NiIsInR5cGU6IjY2Zm9udW50QWRtaW5Qayl6IiwiaWF0IjoiMj01OTUzNTUzNTQ1N30uMjQ4KyDUevkAAz7mJyp529Be1-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": "qsrmlldiecca",
  "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 DPSK) 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/publicApi/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/publicApi/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/publicApi/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 DPSK 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/publicApi/dpskPools/AccountDpskPool-14dc1ed8-ba2a-43bd-8cad-e30dc5f20fb8/dpsks/?pageSize=3&page=2
```

where:

- <https://Jeff243.cloudpath.net/admin/publicApi> is the root URI of the Cloudpath system being used (must include https, as shown)
- 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 48 Request Headers

Key	Value
Content-type	application/json
Authorization	eyJhbGciOiJIUzI1NiJ9.eyJzdWIiOiJqZWZmLnJob2RpZUBjb21tc2NvcGUuY29tliwicm9sZVBrIjoiMjEwMDAiLCJhY2NvdW50QWRtaW5Qayl6IjIiLCJhcGILZXRkiOiJaV2NjTGpQZUdZMGUuIlCjYXQXQjE1NzU1NzUxNTcslmV4cCl6MTU3NTU3NTQ1N30.2q4KTyDUevkAAz7mJyp529Be1-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": [  
    {  
      "guid": "AccountDpsk-5ed29464-d571-48be-a0d0-7574ab87b93d",
```

```

    "name": "DPSK31",
    "passphrase": "jekggviayiv",
    "status": "ACTIVE",
    "ssidList": [],
    "expirationDateTime": "2020-07-27T06:00:00Z",
    "useDeviceCountLimit": false,
    "deviceCountLimit": 0,
    "deviceCount": 0,
    "links": [
      {
        "rel": "self",
        "href": "https://jeff243.cloudpath.net/admin/publicApi/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/publicApi/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/publicApi/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/publicApi/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/publicApi/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/publicApi/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/publicApi/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/publicApi/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/publicApi/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 43](#). Suppose you want to use "like" with the value of "3" to filter on only the DSPKs 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/publicApi/dpskPools/AccountDpskPool-14dc1ed8-ba2a-43bd-8cad-e30dc5f20fb8/dpsks/?filter=name(like:3)
```

where:

- https://Jeff243.cloudpath.net/admin/publicApi is the root URI of the Cloudpath system being used (must include https, as shown)
- AccountDpskPool-14dc1ed8-ba2a-43bd-8cad-e30dc5f20fb8 is the GUID of the DPSK pool from which you want a listing of the DPSKs 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 DPSKs 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 49 Request Headers

Key	Value
Content-type	application/json
Authorization	eyJhbGciOiJIUzI1NiJ9.eyJzdWiiOiJqZWZmLnJob2RpZUBjb21tc2NvcGUuY29tIiwicm9sZVBrIjoiaWJEWMDAilCJhY2NvdW50QWRtaW5QayI6IjIiLCJhcGILZXRkiOiJaV2NjTGpQZUdZMGUilCjYXQiOiJlNzU1NzUxNTcsImV4cCI6MTU3NTU3NTQ1N30u2q4KTyDUevkAAz7mJyp529Be1-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 DPSKs 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",
      "useDeviceCountLimit": false,
      "deviceCountLimit": 0,
      "deviceCount": 0,
      "links": [
        {
          "rel": "self",
          "href": "https://jeff243.cloudpath.net/admin/publicApi/dpskPools/AccountDpskPool-14dc1ed8-ba2a-43bd-8cad-e30dc5f20fb8/dpsks/AccountDpsk-e45f6b14-2cff-4c8d-b44e-102fd67fe02c",

```

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```
        "hreflang": null,
        "media": null,
        "title": null,
        "type": null,
        "deprecation": null
    },
    {
        "rel": "parent",
        "href": "https://jeff243.cloudpath.net/admin/publicApi/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/publicApi/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": "uoosztyuoe1",
    "status": "ACTIVE",
    "ssidList": [],
    "expirationDateTime": "2020-07-27T06:00:00Z",
    "useDeviceCountLimit": false,
    "deviceCountLimit": 0,
    "deviceCount": 0,
    "links": [
        {
            "rel": "self",
            "href": "https://jeff243.cloudpath.net/admin/publicApi/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/publicApi/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/publicApi/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": "jekggviayiv",
    "status": "ACTIVE",
    "ssidList": [],
    "expirationDateTime": "2020-07-27T06:00:00Z",
    "useDeviceCountLimit": false,
    "deviceCountLimit": 0,
    "deviceCount": 0,
    "links": [
      {
        "rel": "self",
        "href": "https://jeff243.cloudpath.net/admin/publicApi/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/publicApi/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/publicApi/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/publicApi/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/publicApi/dpskPools/

```

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```
AccountDpskPool-14dc1ed8-ba2a-43bd-8cad-e30dc5f20fb8",
    "hreflang": null,
    "media": null,
    "title": null,
    "type": null,
    "deprecation": null
  },
  {
    "rel": "devices",
    "href": "https://jeff243.cloudpath.net/admin/publicApi/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/publicApi/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/publicApi/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/publicApi/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 `orderBy` parameter. For a list of properties that support sorting, refer to [Table 43](#). Suppose you want to sort on the name of the DPSK, in descending order. You would add the following string to the URI: `?orderBy=name:desc`

URI:

This example uses the following URI:

```
https://Jeff243.cloudpath.net/admin/publicApi/dpskPools/AccountDpskPool-14dc1ed8-ba2a-43bd-8cad-e30dc5f20fb8/dpsks/?orderBy=name:desc
```

where:

- `https://Jeff243.cloudpath.net/admin/publicApi` is the root URI of the Cloudpath system being used (must include `https`, as shown)
- `AccountDpskPool-14dc1ed8-ba2a-43bd-8cad-e30dc5f20fb8` is the GUID of the DPSK pool from which you want to sort the DPSKs by adding sorting criteria to the URI.
- `?orderBy=name:desc` is the sorting criteria that denotes that you want to display DPSKs 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 50 Request Headers

Key	Value
Content-type	application/json
Authorization	eyJhbGciOiJIUzI1NiJ9.eyJzdWUiOiJqZWZmLnJob2RpZUBjb21tc2NvcGUuY29tIiwicm9sZVBrIjoiaWJlY2NvdW50QWRtaW5QayI6IjliLCJhcGILZXkiOiJaV2NjTjGpQZUdZMGUilCjYXQjE1NzU1NzUxNTcsmV4cCl6MTU3NTU3NTQ1N30.2q4KTyDUevkAAz7mJyp529Be1-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 `orderBy` parameter. As shown below, the DPSKs have been sorting by name in descending order.

NOTE

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

```
{
  "page": {
    "page": 1,
    "pageSize": 7,
    "totalCount": 7
  },
  "contents": [
    {
      "guid": "AccountDpsk-0d37afce-84c5-4d42-9fc8-43c4f1d19b65",
      "name": "dpsk51",
      "passphrase": "qsrmlldiecca",
      "status": "ACTIVE",
      "ssidList": [],
      "expirationDateTime": "2020-12-21T07:00:00Z",
    }
  ]
}
```

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DSPK Resources and URIs

```
    "useDeviceCountLimit": true,
    "deviceCountLimit": 7,
    "deviceCount": 0,
    "vlanid": "2",
    "overrideReauthentication": 86400,
    "links": [
      {
        "rel": "self",
        "href": "https://jeff243.cloudpath.net/admin/publicApi/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/publicApi/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/publicApi/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": "xzhjmjzdao",
    "status": "ACTIVE",
    "ssidList": [],
    "expirationDateTime": "2020-07-27T06:00:00Z",
    "useDeviceCountLimit": false,
    "deviceCountLimit": 0,
    "deviceCount": 0,
    "links": [
      {
        "rel": "self",
        "href": "https://jeff243.cloudpath.net/admin/publicApi/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/publicApi/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/publicApi/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": "uooszyuoel",
    "status": "ACTIVE",
    "ssidList": [],
    "expirationDateTime": "2020-07-27T06:00:00Z",
    "useDeviceCountLimit": false,
    "deviceCountLimit": 0,
    "deviceCount": 0,
    "links": [
      {
        "rel": "self",
        "href": "https://jeff243.cloudpath.net/admin/publicApi/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/publicApi/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/publicApi/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/publicApi/dpskPools/

```

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```
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/publicApi/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/publicApi/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/publicApi/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/publicApi/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/publicApi/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/publicApi/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/publicApi/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/publicApi/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": "cemqwmzgit",
  "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/publicApi/dpskPools/AccountDpskPool-14dc1ed8-ba2a-43bd-8cad-e30dc5f20fb8/dpsks/AccountDpsk-4b67741c-5b87-48dc-b3c8-306f28ee7a38",
      "hreflang": null,
      "media": null,
      "title": null,
      "type": null,
      "deprecation": null
    }
  ],
}

```

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```
{
  "rel": "parent",
  "href": "https://jeff243.cloudpath.net/admin/publicApi/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/publicApi/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 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 51 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	orderBy, like	Yes	The display name for this device
macAddress	String	No	orderBy, like	No	The MAC address for this device
pmk	String	No	Neither	No	The pmk assigned to this device.
ssid	String	No	orderBy, like	No	The SSID this device is connected to
createdDate	String <date>	No	orderBy	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 52 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 3 DSPK 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
Add Device 🔍 ✎ ✖	Device1	112233445566	Jeff eDPSK	20200727 1735 MDT	AccountDpskDevice- 38bc954e-6c5a-4324- 8bde-77b3180bda93	
🔍 ✎ ✖	Device2	112233445567	Jeff eDPSK2	20200727 1737 MDT	AccountDpskDevice- fd0227e1-9364-4e70- a78d-3e6657ee615b	

URI:

This example uses the following URI:

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

where:

- https://Jeff243.cloudpath.net/admin/publicApi is the root URI of the Cloudpath system being used (must include https, as shown)
- 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 53 Request Headers

Key	Value
Content-type	application/json
Authorization	eyJhbGciOiJIUzI1NiJ9.eyJzdWIiOiJqZWZmLnJob2RpZUBjb21tc2NvcGUuY29tliwicm9sZVBrIjoiaWJEWMDAilCjY2NvdW50QWRtaW5QayI6IjIiLiJhcGILZkxiOiJaV2NjTgpQZUdZMGUilCjYXQjE1NzU1NzUxNTcslmV4cC16MTU3NTU3NTQ1N30.2q4KTyDUevkAAz7mJyp529Be1-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 DSPK. 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/publicApi/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/publicApi/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/publicApi/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/publicApi/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 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 54 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"> self: This link includes both the ID of the DPSK pool (the parent of the assigned policy) and the ID of the assigned policy. policy: This link contains the ID of the assigned policy. parent: This link contains the ID of the parent of the assigned policy, which in this case is the DPSK pool.

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 55 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 usage 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. 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 37 on page 38.	200 - OK 401-Unauthorized 404 -Not Found
/certificateTemplates/{guid}/policies	GET	Returns the list of policies assigned to this certificate template, and includes the usage count and the priority of each policy in the list.	200 - OK 401 - Unauthorized 404 -Not Found

TABLE 55 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. NOTE You can perform a GET request on policies to obtain the ID of the policy you want to assign to the certificate. Refer to Table 37 on page 38.	200 - OK 401-Unauthorized 404 -Not Found
/macRegistrationList/{listGuid}/policies	GET	Returns the list of policies assigned to the specified MAC registration list. This includes their usage count and their priority in the list.	200 - OK 401 - Unauthorized 404 - Not Found
/macRegistrationList/{listGuid}/policies/{policyId}	GET	Returns information about the specified policy in this MAC registration list.	200 - OK 401 - Unauthorized 404 - Not Found
	DELETE	Deletes the specified policy from this MAC registration list, and reorders the policy 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. NOTE You can perform a GET request on policies to obtain the ID of the policy you want to assign to the certificate. Refer to Table 37 on page 38.	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/publicApi/dpskPools/AccountDpskPool-14dc1ed8-ba2a-43bd-8cad-e30dc5f20fb8/policies/2
```

where:

- https://Jeff243.cloudpath.net/admin/publicApi is the root URI of the Cloudpath system being used (must include https, as shown)
- 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 37](#) on page 38.

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 56 Request Headers

Key	Value
Content-type	application/json
Authorization	eyJhbGciOiJIUzI1NiJ9.eyJzdWIiOiJqZWZmLnJob2RpZUBjb21tc2NvcGUuY29tliwicm9sZVBrIjoiMjEwMDAiLCJhY2NvdW50QWRtaW5Qayl6IjIiLCJhcGILZXRkiOiJaV2NjTGpQZUdZMGUilCjPpYXQiOiE1NzU1NzUxNTcsmV4cCl6MTU3NTU3NTQ1N30.2q4KTyDUevkAAz7mJyp529Be1-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/publicApi/dpskPools/AccountDpskPool-14dc1ed8-ba2a-43bd-8cad-e30dc5f20fb8/policies/2",
      "hreflang": null,
    }
  ]
}
```

Core Cloudpath APIs

Assigned Policies

```
    "media": null,
    "title": null,
    "type": null,
    "deprecation": null
  },
  {
    "rel": "policy",
    "href": "https://jeff243.cloudpath.net/admin/publicApi/policies/2",
    "hreflang": null,
    "media": null,
    "title": null,
    "type": null,
    "deprecation": null
  },
  {
    "rel": "parent",
    "href": "https://jeff243.cloudpath.net/admin/publicApi/dpskPools/AccountDpskPool-14dc1ed8-
ba2a-43bd-8cad-e30dc5f20fb8",
    "hreflang": null,
    "media": null,
    "title": null,
    "type": null,
    "deprecation": null
  }
]
}
```

Example of Using GET to Obtain the Policies Assigned to a MAC Registration List

This example demonstrates how to obtain the list of policies assigned to a specific MAC registration list by using a REST API GET call.

URI:

This example uses the following URI:

```
https://Jeff245.cloudpath.net/admin/publicApi/registrationLists/
WorkflowRegistration-22510ec0-8f5e-435a-8765-7ce3d643e3fe/policies
```

where:

- <https://Jeff245.cloudpath.net/admin/publicApi> is the root URI of the Cloudpath system being used (must include https, as shown)
- `WorkflowRegistration-22510ec0-8f5e-435a-8765-7ce3d643e3fe` is the GUID of the MAC registration list.

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 57 Request Headers

Key	Value
Content-type	application/json
Authorization	eyJhbGciOiJIUzI1NiJ9.eyJzdWUiOiJqZWZmLnJob2RpZUBjb21tc2NvcGUuY29tliwicm9sZVBrIjoiaWJEWMDAiLCJhY2NvdW50QWRtaW5QayI6IjllLCJhcGILZXXkiOiJaV2NjTgpQZUdZMGUilCJpYXQiOiJlNzU1NzUxNTcsmV4cCl6MTU3NTU3NTQ1N30.2q4KTyDUevkAAz7mJyp529Be1-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 shows information about the three policies that are assigned to the specified MAC registration list.

```
{
  "page": {
    "page": 1,
    "pageSize": 3,
    "totalCount": 3
  },
  "contents": [
    {
      "useCount": 0,
      "priority": 0,
      "links": [
        {
          "rel": "self",
          "href": "https://jeff245.cloudpath.net/admin/publicApi/registrationLists/WorkflowRegistration-22510ec0-8f5e-435a-8765-7ce3d643e3fe/policies/2",
          "hreflang": null,
          "media": null,
          "title": null,
          "type": null,
          "deprecation": null
        },
        {
          "rel": "policies",
          "href": "https://jeff245.cloudpath.net/admin/publicApi/policies/2",
          "hreflang": null,
          "media": null,
          "title": null,
          "type": null,
          "deprecation": null
        },
        {
          "rel": "parent",
          "href": "https://jeff245.cloudpath.net/admin/publicApi/registrationLists/WorkflowRegistration-22510ec0-8f5e-435a-8765-7ce3d643e3fe",
          "hreflang": null,
          "media": null,
          "title": null,
          "type": null,
          "deprecation": null
        }
      ]
    },
    {
      "useCount": 0,
      "priority": 1,
      "links": [
        {
          "rel": "self",
          "href": "https://jeff245.cloudpath.net/admin/publicApi/registrationLists/WorkflowRegistration-22510ec0-8f5e-435a-8765-7ce3d643e3fe/policies/1",
          "hreflang": null,
          "media": null,
          "title": null,
          "type": null,
          "deprecation": null
        },
        {
          "rel": "policies",
          "href": "https://jeff245.cloudpath.net/admin/publicApi/policies/1",
          "hreflang": null,
          "media": null,
          "title": null,
          "type": null,
          "deprecation": null
        },
        {
          "rel": "parent",
          "href": "https://jeff245.cloudpath.net/admin/publicApi/registrationLists/WorkflowRegistration-22510ec0-8f5e-435a-8765-7ce3d643e3fe",
          "hreflang": null,
          "media": null,
          "title": null,
          "type": null,
          "deprecation": null
        }
      ]
    }
  ]
}
```

```
WorkflowRegistration-22510ec0-8f5e-435a-8765-7ce3d643e3fe",
    "hreflang": null,
    "media": null,
    "title": null,
    "type": null,
    "deprecation": null
  }
]
},
{
  "useCount": 0,
  "priority": 2,
  "links": [
    {
      "rel": "self",
      "href": "https://jeff245.cloudpath.net/admin/publicApi/registrationLists/WorkflowRegistration-22510ec0-8f5e-435a-8765-7ce3d643e3fe/policies/3",
      "hreflang": null,
      "media": null,
      "title": null,
      "type": null,
      "deprecation": null
    },
    {
      "rel": "policies",
      "href": "https://jeff245.cloudpath.net/admin/publicApi/policies/3",
      "hreflang": null,
      "media": null,
      "title": null,
      "type": null,
      "deprecation": null
    },
    {
      "rel": "parent",
      "href": "https://jeff245.cloudpath.net/admin/publicApi/registrationLists/WorkflowRegistration-22510ec0-8f5e-435a-8765-7ce3d643e3fe",
      "hreflang": null,
      "media": null,
      "title": null,
      "type": null,
      "deprecation": null
    }
  ]
}
]
}
```

Property Management

Properties

You can use REST API 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 58 Resource: Properties

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 property.
name	String	Yes	orderBy, like	No	The display name for this property, must be unique
address	String	Yes	orderBy, like	Yes	The address for this property.
description	String	Yes	orderBy, like	Yes	A description for this property.
enforceMaxUnits	Boolean	Yes	orderBy, like	Yes<false>	Indicates if a value configured for "max units" will be enforced when adding a unit to the property.
maxUnits	int	Yes	orderBy, like	No<0>	The maximum number of units permitted for this property.
allowSeparateGuestSecret	Boolean	Yes	orderBy, 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	orderBy, like	Yes	Name that will be assigned in all email and SMS communications.
managementPhone	String	Yes	orderBy, like	Yes	Phone that will be assigned in all email and SMS communications.
managementEmail	String	Yes	orderBy, 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.
sendEmail	Boolean	Yes	Neither	Yes<true>	Indicates that email will be sent to tenants when there are changes on a unit.
sendSms	Boolean	Yes	Neither	Yes<true>	Indicates that SMS will be sent to tenants when there are changes on a unit.
smsPassphraseChange	String	Yes	Neither	Yes	If enabled, this is the SMS text that gets sent to the unit owner when the passphrase or guest passphrase is changed. Users are responsible for creating text correctly if they are using the guest passphrase or the tenant portal. The following variables are used to substitute the passphrases and the portal URL in all cases: \${PROPERTY_NAME} , \${UNIT_PASSPHRASE}, \${GUEST_PASSPHRASE}, \${UNIT_PORTAL_URL}, \${UNIT_MANAGER}, \${UNIT_CONTACT_NAME}
emailPassphraseSubject	String	Yes	Neither	Yes	If set, this is the subject for the email that gets sent to the unit owner when either the passphrase or guest passphrase for a unit is changed.

TABLE 58 Resource: Properties (continued)

Property Name	Type	Editable	Sort/Filter	Optional in Request/Response Body?	Description
emailPassphraseChange	String	Yes	Neither	Yes	If set, this is the email text that will be sent to the unit owner when the passphrase or guest passphrase is changed. Users are responsible for creating text correctly if they are using the guest passphrase or the tenant portal. The following variables are used to substitute the passphrases and the portal URL in all cases: \${PROPERTY_NAME} , \${UNIT_PASSPHRASE}, \${GUEST_PASSPHRASE}, \${UNIT_PORTAL_URL}, \${UNIT_MANAGER}, \${UNIT_CONTACT_NAME}
smsAssignedUnit	String	Yes	Neither	Yes	If set, this is the SMS text that gets sent to the unit owner when a unit is created. Users are responsible for creating text correctly if they are using the guest passphrase or the tenant portal. The following variables are used to substitute the passphrases and the portal URL in all cases: \${PROPERTY_NAME} , \${UNIT_PASSPHRASE}, \${GUEST_PASSPHRASE}, \${UNIT_PORTAL_URL}, \${UNIT_MANAGER}, \${UNIT_CONTACT_NAME}
emailAssignedUnitSubject	String	Yes	Neither	Yes	If set, this is the subject for the email that gets sent to the unit owner when they are assigned a unit.
emailAssignedUnit	String	Yes	Neither	Yes	If set, this is the email text that will be sent to the unit owner when a unit is created. Users are responsible for creating text correctly if they are using the guest passphrase or the tenant portal. The following variables are used to substitute the passphrases and the portal URL in all cases: \${PROPERTY_NAME} , \${UNIT_PASSPHRASE}, \${GUEST_PASSPHRASE}, \${UNIT_PORTAL_URL}, \${UNIT_MANAGER}, \${UNIT_CONTACT_NAME}
links: self, units, dpskPool, uiConfiguration, networkSegmentationGroups	Link	Yes*	orderBy, like (dpskPool)	Optional on create only, but not on any subsequent uses.	Self-referencing link, dpskPool, uiConfiguration link, link to the list of units associated with this property, and links to any network segmentation groups to which the property may be assigned. 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 59 Resource: UiConfiguration

Property Name	Type	Editable	Sort/Filter	Optional in Request/Response Body?	Description
apiAllowed	Boolean	Yes	No	Yes<true>	Indicates if access is permitted to the tenant API.
portalAllowed	Boolean	Yes	No	Yes<true>	Indicates if access is permitted to the tenant portal. The "apiAllowed" property must be enabled for this to be true.
tenantSetDpsk	Boolean	Yes	No	Yes; default is <false>	Indicates if the tenant can manually set the wifi passphrase on the tenant portal to a specific desired value.

TABLE 59 Resource: UiConfiguration (continued)

Property Name	Type	Editable	Sort/Filter	Optional in Request/Response Body?	Description
emailTextResetAuth	String	Yes	No	Yes	If set, this is the email text that gets sent to the unit owner when the tenant portal authentication token is reset. The user is responsible for creating text correctly and can use the following variables to substitute the passphrases and the tenant portal URL in all cases: \${PROPERTY_NAME} , \${UNIT_PASSPHRASE}, \${GUEST_PASSPHRASE}, \${UNIT_PORTAL_URL}, \${UNIT_MANAGER}, \${UNIT_CONTACT_NAME}
emailSubjectResetAuth	String	Yes	No	Yes	If set, this is the email subject that gets sent to the unit owner when the tenant portal authentication token is reset.
smsTextResetAuth	String	Yes	No	Yes	If set, this is the SMS message that gets sent to the unit owner when the tenant portal authentication token is reset. The user is responsible for creating text correctly and can use the following variables to substitute the passphrases and the tenant portal URL in all cases: \${PROPERTY_NAME} , \${UNIT_PASSPHRASE}, \${GUEST_PASSPHRASE}, \${UNIT_PORTAL_URL}, \${UNIT_MANAGER}, \${UNIT_CONTACT_NAME}
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.
loginText	String (5.9)	Yes	No	Yes	Text to display during login to the tenant portal.
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.
iconFileName	String	No	No	Yes	The name of the icon file, if one has been uploaded. This will be updated when the icon file is changed via the icon file link.
links					logoFile, favicon, 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 60 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
/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}/networkSegmentationGroups	GET	Returns the network segmentation groups assigned to the specified property. This is returned as a list. The list will be empty if the property has not been assigned to any network segmentation groups. If the Cloudpath server has not been correctly configured for SmartZone integration, this URI generates a "403 - Forbidden" message.	404 - Not found 403 - Forbidden 401 - Unauthorized 200 - OK

TABLE 60 Property URIs and Actions (continued)

URI	Action	Description	Return Codes
/properties/{guid}/networkSegmentationGroups/{segmentGuid}	PUT	Assigns or replaces a network segmentation group to the specified property. There is a null body expected, and if provided is ignored. If there is already one network segmentation group assigned to the specified property, that group is removed, and replaced by the network segmentation group whose GUID is specified in this URI. Also, this URI is permitted only if there are no units associated with the specified property; otherwise a "409 - Conflict" message is returned. If the Cloudpath server has not been correctly configured for SmartZone integration, this URI generates a "403 - Forbidden" message.	409 - Conflict 404 - Not found 403 - Forbidden 401 - Unauthorized 200 - OK
	DELETE	Removes the specified network segmentation group that is currently assigned to the property. All VNIs and APs associated with this network segmentation group are also removed. This cannot be undone. If the Cloudpath server has not been correctly configured for SmartZone integration, this URI generates a "403 - Forbidden" message.	404 - Not found 403 - Forbidden 401 - Unauthorized 200 - OK
/properties/{guid}/uiConfiguration/logoFile	POST	<p>This method allows you to post an image file that will be used for the tenant portal logo.</p> <p>NOTE You must include the following Request header: Key: Content-Type Value: multipart/form-data</p> <p>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.</p>	422 - Unprocessable Entity 404 - Not found 401 - Unauthorized 200 - OK
/properties/{guid}/uiConfiguration/favicon	POST	<p>This method allows you to post an image file that will be used for the tenant portal favicon.</p> <p>NOTE You must include the following Request header: Key: Content-Type Value: multipart/form-data</p> <p>The form data can contain two entries with the following keys:</p> <ul style="list-style-type: none"> file - favicon file contents. iconFilename - a text entry with the name of the favicon file. <p>You can also set a null file if you do not want a favicon to appear on the tenant portal. If the file name is empty, the favicon file is null regardless of the data in the form. If the form data is bad, a "422 - Unprocessable Entity" error code is sent.</p>	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/publicApi/properties
```

where `https://Jeff245.cloudpath.net/admin/publicApi` is the root URI of the Cloudpath system being used (must include `https`, as shown).

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 61 Request Headers

Key	Value
Content-type	application/json
Authorization	eyJhbGciOiJIUzI1NiJ9.eyJzdWiiOiJqZWZmLnJob2RpZUBjb21tc2NvcGUuY29tIiwicm9sZVBrIjoiaWJEWMDAilCjhy2NvdW50QWRtaW5QayI6IjIiLCJhcGILZXkiOiJaV2NjTGpQZUdZMGUilCjYXQiOiJlNzU1NzUxNTcsImV4cCl6MTU3NTU3NTQ1N30.2q4KTyDUevkAAz7mJyp529Be1-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, three properties exist, and the property called "Tech Pubs Building 1" is part of a network segmentation group.

```
{
  "page": {
    "page": 1,
    "pageSize": 3,
    "totalCount": 3
  },
  "contents": [
    {
      "guid": "Property-f6c3d9be-9763-4549-9a3d-1157bfd5a7eb",
      "name": "Building 1",
      "address": "000 Lake View Road\r\nLake Town, MN",
      "description": "",
      "enforceMaxUnits": false,
      "maxUnits": 0,
      "allowSeparateGuestSecret": true,
      "ssids": [
        "ssid1"
      ],
      "managementName": "J. Smith",
      "managementPhone": "555-000-0100",
      "managementEmail": "jeff@commscope.com",
      "tenantPortalHelpText": "Please contact management for any concerns.",
      "tenantPortalAnnouncements": "Welcome to your tenant portal",
      "sendEmail": true,
      "sendSms": true,
      "smsPassphraseChange": "",
      "emailPassphraseSubject": ""
    }
  ]
}
```

```

"emailPassphraseChange": "",
"smsAssignedUnit": "",
"emailAssignedUnitSubject": "",
"emailAssignedUnit": "",
"links": [
  {
    "rel": "self",
    "href": "https://jeff245.cloudpath.net/admin/publicApi/properties/Property-
f6c3d9be-9763-4549-9a3d-1157bfd5a7eb",
    "hreflang": null,
    "media": null,
    "title": null,
    "type": null,
    "deprecation": null
  },
  {
    "rel": "uiConfiguration",
    "href": "https://jeff245.cloudpath.net/admin/publicApi/properties/Property-
f6c3d9be-9763-4549-9a3d-1157bfd5a7eb/uiConfiguration",
    "hreflang": null,
    "media": null,
    "title": null,
    "type": null,
    "deprecation": null
  },
  {
    "rel": "dpskPool",
    "href": "https://jeff245.cloudpath.net/admin/publicApi/dpskPools/
AccountDpskPool-4dlf71cb-c4b7-403e-aceb-7e8f1d38469c",
    "hreflang": null,
    "media": null,
    "title": null,
    "type": null,
    "deprecation": null
  },
  {
    "rel": "units",
    "href": "https://jeff245.cloudpath.net/admin/publicApi/properties/Property-
f6c3d9be-9763-4549-9a3d-1157bfd5a7eb/units?page=1&pageSize=10{&filter,orderBy}",
    "hreflang": null,
    "media": null,
    "title": null,
    "type": null,
    "deprecation": null
  }
]
},
{
  "guid": "Property-82d632d7-e1cc-44fc-a09b-63a34582c496",
  "name": "Building 2",
  "address": "200 Lake View Road\r\nLake Town, MN",
  "description": "",
  "enforceMaxUnits": false,
  "maxUnits": 0,
  "allowSeparateGuestSecret": true,
  "ssids": [
    "ssid2"
  ],
  "managementName": "J. Smith",
  "managementPhone": "555-000-0100",
  "managementEmail": "jeff@commscope.com",
  "tenantPortalHelpText": "",
  "tenantPortalAnnouncements": "",
  "sendEmail": true,
  "sendSms": true,
  "smsPassphraseChange": "",
  "emailPassphraseSubject": "",
  "emailPassphraseChange": "",
  "smsAssignedUnit": "",
  "emailAssignedUnitSubject": "",
  "emailAssignedUnit": "",
  "links": [

```

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```

    {
      "rel": "self",
      "href": "https://jeff245.cloudpath.net/admin/publicApi/properties/Property-82d632d7-
e1cc-44fc-a09b-63a34582c496",
      "hreflang": null,
      "media": null,
      "title": null,
      "type": null,
      "deprecation": null
    },
    {
      "rel": "uiConfiguration",
      "href": "https://jeff245.cloudpath.net/admin/publicApi/properties/Property-82d632d7-
e1cc-44fc-a09b-63a34582c496/uiConfiguration",
      "hreflang": null,
      "media": null,
      "title": null,
      "type": null,
      "deprecation": null
    },
    {
      "rel": "dpskPool",
      "href": "https://jeff245.cloudpath.net/admin/publicApi/dpskPools/AccountDpskPool-
ce59eb06-4a07-42e0-9128-44c97e607ab2",
      "hreflang": null,
      "media": null,
      "title": null,
      "type": null,
      "deprecation": null
    },
    {
      "rel": "units",
      "href": "https://jeff245.cloudpath.net/admin/publicApi/properties/Property-82d632d7-
e1cc-44fc-a09b-63a34582c496/units?page=1&pageSize=10{&filter,orderBy}",
      "hreflang": null,
      "media": null,
      "title": null,
      "type": null,
      "deprecation": null
    }
  ]
},
{
  "guid": "Property-40ac7e72-97ed-4567-a180-7d20967c5a72",
  "name": "Tech Pubs Building 1 ",
  "address": "001 Tech Pubs Road\r\nLake Town, CA",
  "description": "",
  "enforceMaxUnits": false,
  "maxUnits": 0,
  "allowSeparateGuestSecret": true,
  "ssids": [
    "Jeff eDPSK"
  ],
  "managementName": "Sushma A",
  "managementPhone": "0005550200",
  "managementEmail": "sushma@commscope.com",
  "tenantPortalHelpText": "",
  "tenantPortalAnnouncements": "",
  "sendEmail": true,
  "sendSms": true,
  "smsPassphraseChange": "",
  "emailPassphraseSubject": "",
  "emailPassphraseChange": "",
  "smsAssignedUnit": "",
  "emailAssignedUnitSubject": "",
  "emailAssignedUnit": "",
  "links": [
    {
      "rel": "self",
      "href": "https://jeff245.cloudpath.net/admin/publicApi/properties/
Property-40ac7e72-97ed-4567-a180-7d20967c5a72",
      "hreflang": null,

```



```

        "media": null,
        "title": null,
        "type": null,
        "deprecation": null
    },
    {
        "rel": "uiConfiguration",
        "href": "https://jeff245.cloudpath.net/admin/publicApi/properties/
Property-40ac7e72-97ed-4567-a180-7d20967c5a72/uiConfiguration",
        "hreflang": null,
        "media": null,
        "title": null,
        "type": null,
        "deprecation": null
    },
    {
        "rel": "dpskPool",
        "href": "https://jeff245.cloudpath.net/admin/publicApi/dpskPools/
AccountDpskPool-390c47b8-5c61-4d06-bb9b-6693c65db8b6",
        "hreflang": null,
        "media": null,
        "title": null,
        "type": null,
        "deprecation": null
    },
    {
        "rel": "units",
        "href": "https://jeff245.cloudpath.net/admin/publicApi/properties/
Property-40ac7e72-97ed-4567-a180-7d20967c5a72/units?page=1&pageSize=10{&filter,orderBy}",
        "hreflang": null,
        "media": null,
        "title": null,
        "type": null,
        "deprecation": null
    },
    {
        "rel": "networkSegmentationGroups",
        "href": "https://jeff245.cloudpath.net/admin/publicApi/properties/
Property-40ac7e72-97ed-4567-a180-7d20967c5a72/networkSegmentationGroups?
page=1&pageSize=10{&filter,orderBy}",
        "hreflang": null,
        "media": null,
        "title": null,
        "type": null,
        "deprecation": null
    }
}
]
}
}

```

Example of Using GET to Obtain the Network Segmentation Group Assigned to a Property

This example demonstrates how to obtain information about the network segmentation group that has been assigned to the specified property in your Cloudpath system by using the REST API GET call.

NOTE

A property does not necessarily need to be part of a network segmentation group.

URI:

This example uses the following URI:

```

https://Jeff245.cloudpath.net/admin/publicApi/properties/Property-40ac7e72-97ed-4567-a180-7d20967c5a72/
networkSegmentationGroups

```



```

    {
      "rel": "vxlanNetworkIdentifiers",
      "href": "https://jeff245.cloudpath.net/admin/publicApi/networkSegmentationGroups/
felblea8-87c0-467f-9b9f-7827f576cd82/vxlanNetworkIdentifiers?page=1&pageSize=10{&filter,orderBy}",
      "hreflang": null,
      "media": null,
      "title": null,
      "type": null,
      "deprecation": null
    },
    {
      "rel": "accessPoints",
      "href": "https://jeff245.cloudpath.net/admin/publicApi/networkSegmentationGroups/
felblea8-87c0-467f-9b9f-7827f576cd82/accessPoints?page=1&pageSize=10{&filter,orderBy}",
      "hreflang": null,
      "media": null,
      "title": null,
      "type": null,
      "deprecation": null
    }
  ]
}
]
}

```

Units

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

Beginning with the Cloudpath 5.9R3 release, a unit can be assigned to a property that is part of a network segmentation group. For more information about network segmentation, refer to the *RUCKUS SmartZone and Cloudpath Network Segmentation Configuration Guide*. With network segmentation, the concept of "VLAN" does not apply. If a unit is part of a property assigned to a network segmentation group, units are assigned VxlanNetworkIdentifiers (VNIs), APs, and ethernet ports. Therefore, REST APIs described here are shown with examples of units that are part of a network segmentation group and as well as with examples of units that are not part of a network segmentation group.

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 63 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 Tenant Portal API Requirements on page 181.

TABLE 63 Resource: Unit (continued)

Property Name	Type	Editable	Sort/Filter	Optional in Request/Response Body?	Description
contact (embedded)	Contact <Object>	Yes	Neither	Yes	Contact information for this unit.
links	Link	No	No	Yes	<p>Contains the following link as hrefs for use in other API calls:</p> <ul style="list-style-type: none"> • Self-referencing link • DPSK link • Guest DPSK link • Property link • Tenant portal link • Links to associated devices • Links to vxlan Network Identifiers • Links to APs • Link to network segmentation group <p>NOTE If desired, you can go to the DPSKs to set overrides for the secret, guest secret, and vlans.</p>

TABLE 64 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 65 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

TABLE 65 Units URIs and Actions (continued)

URI	Action	Description	Return Codes
/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
/properties/{prop_guid}/units/{guid}/vxlanNetworkIdentifiers	GET	Returns the details on the vxLanNetwork assignment for the specified unit. If the Cloudpath server has not been correctly configured for SmartZone integration, this URI generates a "403 - Forbidden" message.	404 - Not found 403 - Forbidden 401 - Unauthorized 200 - OK
	DELETE	Removes the vxlan assignment. Any ethernet ports associated with this vxLan assignment are released. If the Cloudpath server has not been correctly configured for SmartZone integration, this URI generates a "403 - Forbidden" message.	404 - Not found 403 - Forbidden 401 - Unauthorized 204 - No content 200 - OK
			404 - Not found 403 - Forbidden 401 - Unauthorized 200 - OK
/properties/{prop_guid}/units/{guid}/vxlanNetworkIdentifiers/{vni}	PUT	Assigns or replaces the vxLanNetwork assignment for this unit, based on the specified VNI. Any assigned ethernet ports on the existing vxLan are reassigned to the new vxLan. If there is no ethernet assignment, but an AP has been assigned and at least one ethernet port is available, this ethernet port is assigned to the vxlan. If the Cloudpath server has not been correctly configured for SmartZone integration, this URI generates a "403 - Forbidden" message.	409 - Conflict 404 - Not found 401 - Unauthorized 200 - OK
/properties/{prop_guid}/units/{guid}/accessPoints	GET	Gets the assigned APs for the specified unit. If the Cloudpath server has not been correctly configured for SmartZone integration, this URI generates a "403 - Forbidden" message.	404 - Not found 403 - Forbidden 401 - Unauthorized 200 - OK
/properties/{prop_guid}/units/{guid}/accessPoints/{accessPointGuid}	PUT	Assigns the specified AP to the specified unit (or replaces the existing AP if one exists). If a vxLan is assigned to the unit, and if at least one ethernet port is available, that port is assigned to the vxLAN. If the Cloudpath server has not been correctly configured for SmartZone integration, this URI generates a "403 - Forbidden" message.	409 - Conflict 403 - Forbidden 404 - Not found 401 - Unauthorized 200 - OK

TABLE 65 Units URIs and Actions (continued)

URI	Action	Description	Return Codes
/properties/{prop_guid}/units/{guid}/accessPoints	DELETE	Removes the AP assignment from the specified unit. The VxLan assignment does not change, but the ethernet ports associated with the existing vxLan will be unassigned. If the Cloudpath server has not been correctly configured for SmartZone integration, this URI generates a "403 - Forbidden" message.	404 - Not found 401 - Unauthorized 204 - No content 200 - OK
/properties/{prop_guid}/units/{guid}/accessPoints/ethernetPorts	GET	Returns the list of ethernet ports assigned to the specified unit on the assigned AP. If the Cloudpath server has not been correctly configured for SmartZone integration, this URI generates a "403 - Forbidden" message.	404 - Not found 401 - Unauthorized 200 - OK
/properties/{prop_guid}/units/{guid}/accessPoints/ethernetPorts/{portName}	PUT	Adds a port assignment between the AP and the unit. If the port is already assigned to another unit, a "409 - Conflict" message is generated. If the port name is not valid, a "404 - Not found" message is generated. If the Cloudpath server has not been correctly configured for SmartZone integration, a "403 - Forbidden" message is generated.	409 - Conflict 403 - Forbidden 404 - Not found 401 - Unauthorized 200 - OK
/properties/{prop_guid}/units/{guid}/accessPoints/ethernetPorts/{portName}	DELETE	Removes the association between the specified ethernet port and the unit. If the Cloudpath server has not been correctly configured for SmartZone integration, a "403 - Forbidden" message is generated. If a connection error occurs with the integrated SmartZone, a "409 - Conflict" message is returned.	409 - Conflict 403 - Forbidden 404 - Not found 401 - Unauthorized 204 - No content 200 - OK

Example of Using GET for Units That are Not Part of a Network Segmentation Group

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/publicApi/properties/Property-afaccdf8-5e39-41ce-9098-9747cc38aaa0/units
```

where:

- https://Jeff245.cloudpath.net/admin/publicApi is the root URI of the Cloudpath system being used (must include https, as shown)
- 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 66 Request Headers

Key	Value
Content-type	application/json

TABLE 66 Request Headers (continued)

Key	Value
Authorization	eyJhbGciOiJIUzI1NiJ9.eyJzdWUiOiJqZWZmLnJob2RpZUBjb21tc2NvcGUuY29tIiwicm9sZVBrIjoiaWMDAilCjY2NvdW50QWRtaW5QayI6IjIiLCJhcGILZXRkiOiJaV2NjTGpQZUdZMGUilCjYXQjOjE1NzU1NzUxNTcslmV4cCl6MTU3NTU3NTQ1N30.2q4KTyDUevkAAz7mJyp529Be1-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/
V0A==:oXgm2xCUIPuD8yFKYZnNDQ==",
      "contact": {
        "contactName": "Andy Jones",
        "phoneNumber": "000-555-0101",
        "email": "aj@jones.com",
        "links": [
          {
            "rel": "smsCountryCode",
            "href": "https://jeff245.cloudpath.net/admin/publicApi/system/smsCountryCodes/
12310",
            "hreflang": null,
            "media": null,
            "title": null,
            "type": null,
            "deprecation": null
          }
        ]
      },
      "links": [
        {
          "rel": "property",
          "href": "https://jeff245.cloudpath.net/admin/publicApi/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/publicApi/properties/Property-
afaccdf8-5e39-41ce-9098-9747cc38aaa0/units/Unit-f59f2c93-6786-4d8e-adad-2e44d33df399",
          "hreflang": null,
          "media": null,
          "title": null,

```

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```
        "type": null,
        "deprecation": null
    },
    {
        "rel": "dpsk",
        "href": "https://jeff245.cloudpath.net/admin/publicApi/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/publicApi/dpskPools/AccountDpskPool-6ee78505-926d-433a-aead-1897e4e7ea9e/dpsks/AccountDpsk-7368a879-82ec-4721-acd6-0339ff448f4a",
        "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",
        "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==:
+zyhD5AEVa6xcZ9gwexW0w==",
    "contact": {
        "contactName": "Joe Johnson",
        "phoneNumber": "000-555-0102",
        "email": "jj@johnson.com",
        "links": [
            {
                "rel": "smsCountryCode",
                "href": "https://jeff245.cloudpath.net/admin/publicApi/system/smsCountryCodes/12310",
                "hreflang": null,
                "media": null,
                "title": null,
                "type": null,
                "deprecation": null
            }
        ]
    }
},
"links": [
    {
        "rel": "property",
        "href": "https://jeff245.cloudpath.net/admin/publicApi/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/publicApi/properties/Property-afaccd8-5e39-41ce-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/publicApi/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/publicApi/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-afaccd8-5e39-41ce-9098-9747cc38aaa0",
      "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==:yVJeg3goCJ9FdzVy6EPNw==",
  "contact": {
    "contactName": "Jennifer Wilson",
    "phoneNumber": "000-555-0103",
    "email": "jw@wilson.com",
    "links": [
      {
        "rel": "smsCountryCode",
        "href": "https://jeff245.cloudpath.net/admin/publicApi/system/smsCountryCodes/12310",
        "hreflang": null,
        "media": null,
        "title": null,
        "type": null,
        "deprecation": null
      }
    ]
  }
},
"links": [
  {

```

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```
        "rel": "property",
        "href": "https://jeff245.cloudpath.net/admin/publicApi/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/publicApi/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/publicApi/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/publicApi/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%7CGSFLgi5Smkx1D2dCpz8XWA%3D%3D%3AhpYYeJUCwIYstNeiwbJiCQ%3D%3D&property=Property-
afaccdf8-5e39-41ce-9098-9747cc38aaa0",
        "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/publicApi/system/smsCountryCodes/
12310",
                "hreflang": null,
                "media": null,
            }
        ]
    }
}
```

```

        "title": null,
        "type": null,
        "deprecation": null
    }
  ]
},
"links": [
  {
    "rel": "property",
    "href": "https://jeff245.cloudpath.net/admin/publicApi/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/publicApi/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/publicApi/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/publicApi/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",
    "hreflang": null,
    "media": null,
    "title": null,
    "type": null,
    "deprecation": null
  }
]
}
]
}

```

Example of Using GET for Units That Are Part of a Network Segmentation Group

This example demonstrates how to obtain information about all units within one property that is part of a network segmentation group. The response body includes information about APs and vLAN Identifiers, for example, that are applicable to a network segmentation group only.

URI:

This example uses the following URI:

```
https://Jeff245.cloudpath.net/admin/publicApi/properties/Property-40ac7e72-97ed-4567-a180-7d20967c5a72/units
```

where:

- https://Jeff245.cloudpath.net/admin/publicApi is the root URI of the Cloudpath system being used (must include https, as shown)
- Property-40ac7e72-97ed-4567-a180-7d20967c5a72 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 67 Request Headers

Key	Value
Content-type	application/json
Authorization	eyJhbGciOiJIUzI1NiJ9.eyJzdWiiOiJqZWZmLnJob2RpZUBjb21tc2NvcGUuY29tIiwicm9sZVBrIjoiaWJwMDAiLCJhY2NvdW50QWRtaW5Qayl6IjIiLCJhcGILZXRkiOiJaV2NjTjGpQZUdZMGUilCjYXQXQjE1NzU1NzUxNTcslmV4cCl6MTU3NTU3NTQ1N30.2q4KTyDUevkAAz7mJyp529Be1-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": 2,
    "totalCount": 2
  },
  "contents": [
    {
      "guid": "Unit-2d6dc238-5065-4be4-ac8e-7cc46d0f8e11",
      "number": "1a",
      "description": "",
      "status": "ACTIVE",
      "apiHashSecret": "CPNENCv2:BC|F3E0DD61-33DE-4610-8FB3-4D46F5E61977|BsEFs6bPiDoyCWWckGS/rw==vRhjZyHh2EiZ+RhxHIfhlw==",
      "contact": {
        "contactName": "John Washington",
        "phoneNumber": "555-000-0201",
        "email": "jw@washington.com",
        "links": [
          {
            "rel": "smsCountryCode",
            "href": "/publicApi/system/smsCountryCodes/12310",
            "hreflang": null,
            "media": null,
            "title": null,
            "type": null,
            "deprecation": null
          }
        ]
      }
    }
  ]
}
```

```

    ]
  },
  "links": [
    {
      "rel": "property",
      "href": "https://jeff245.cloudpath.net/admin/publicApi/properties/Property-40ac7e72-97ed-4567-a180-7d20967c5a72",
      "hreflang": null,
      "media": null,
      "title": null,
      "type": null,
      "deprecation": null
    },
    {
      "rel": "self",
      "href": "https://jeff245.cloudpath.net/admin/publicApi/properties/Property-40ac7e72-97ed-4567-a180-7d20967c5a72/units/Unit-2d6dc238-5065-4be4-ac8e-7cc46d0f8e11",
      "hreflang": null,
      "media": null,
      "title": null,
      "type": null,
      "deprecation": null
    },
    {
      "rel": "dpsk",
      "href": "https://jeff245.cloudpath.net/admin/publicApi/dpskPools/AccountDpskPool-390c47b8-5c61-4d06-bb9b-6693c65db8b6/dpsks/AccountDpsk-fe260a8f-4888-497c-a153-4d7e7d68a29e",
      "hreflang": null,
      "media": null,
      "title": null,
      "type": null,
      "deprecation": null
    },
    {
      "rel": "guestDpsk",
      "href": "https://jeff245.cloudpath.net/admin/publicApi/dpskPools/AccountDpskPool-390c47b8-5c61-4d06-bb9b-6693c65db8b6/dpsks/AccountDpsk-fcf7b80c-49a2-4549-8ae3-b05b9c58c714",
      "hreflang": null,
      "media": null,
      "title": null,
      "type": null,
      "deprecation": null
    },
    {
      "rel": "tenantPortal",
      "href": "https://jeff245.cloudpath.net/tenant?&auth=CPNENCv2%3ABC%7C406DBE3F-88AB-4D56-9334-71AE1C6BF8E5%7Cjv%2FKqf6%2Bf13mpRyjn4Qayg%3D%3D%3A%2F4Li71KKLAz4HJuFlPZnQQ%3D%3D&property=Property-40ac7e72-97ed-4567-a180-7d20967c5a72&api=osqQkqQ4GY91",
      "hreflang": null,
      "media": null,
      "title": null,
      "type": null,
      "deprecation": null
    },
    {
      "rel": "accessPoints",
      "href": "https://jeff245.cloudpath.net/admin/publicApi/properties/Property-40ac7e72-97ed-4567-a180-7d20967c5a72/units/Unit-2d6dc238-5065-4be4-ac8e-7cc46d0f8e11/accessPoints",
      "hreflang": null,
      "media": null,
      "title": null,
      "type": null,
      "deprecation": null
    },
    {
      "rel": "vxlanNetworkIdentifiers",
      "href": "https://jeff245.cloudpath.net/admin/publicApi/properties/Property-40ac7e72-97ed-4567-a180-7d20967c5a72/units/Unit-2d6dc238-5065-4be4-ac8e-7cc46d0f8e11/vxlanNetworkIdentifiers",
      "hreflang": null,

```

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```

        "media": null,
        "title": null,
        "type": null,
        "deprecation": null
    }
}
},
{
    "guid": "Unit-0becd6f0-5305-4ae5-b390-61b6e40fa511",
    "number": "1b",
    "description": "",
    "status": "ACTIVE",
    "apiHashSecret": "CPNENCv2:BC|EA7A9860-566D-4D67-AF92-D32B91A8B269|RChY90FgpL5/
lqXyRb9+uw==:VNOqlwJxl2pPYuDhx6slsw==",
    "contact": {
        "contactName": "Joseph Green",
        "phoneNumber": "555-000-0202",
        "email": "jg@green.com",
        "links": [
            {
                "rel": "smsCountryCode",
                "href": "/publicApi/system/smsCountryCodes/12310",
                "hreflang": null,
                "media": null,
                "title": null,
                "type": null,
                "deprecation": null
            }
        ]
    },
    "links": [
        {
            "rel": "property",
            "href": "https://jeff245.cloudpath.net/admin/publicApi/properties/
Property-40ac7e72-97ed-4567-a180-7d20967c5a72",
            "hreflang": null,
            "media": null,
            "title": null,
            "type": null,
            "deprecation": null
        },
        {
            "rel": "self",
            "href": "https://jeff245.cloudpath.net/admin/publicApi/properties/
Property-40ac7e72-97ed-4567-a180-7d20967c5a72/units/Unit-0becd6f0-5305-4ae5-b390-61b6e40fa511",
            "hreflang": null,
            "media": null,
            "title": null,
            "type": null,
            "deprecation": null
        },
        {
            "rel": "dpsk",
            "href": "https://jeff245.cloudpath.net/admin/publicApi/dpskPools/
AccountDpskPool-390c47b8-5c61-4d06-bb9b-6693c65db8b6/dpsks/AccountDpsk-0a13292e-8dc7-499c-
ald1-4992e16e5a6a",
            "hreflang": null,
            "media": null,
            "title": null,
            "type": null,
            "deprecation": null
        },
        {
            "rel": "guestDpsk",
            "href": "https://jeff245.cloudpath.net/admin/publicApi/dpskPools/
AccountDpskPool-390c47b8-5c61-4d06-bb9b-6693c65db8b6/dpsks/AccountDpsk-
a1f24693-2912-4ed8-8828-830173fe2e47",
            "hreflang": null,
            "media": null,
            "title": null,
            "type": null,
            "deprecation": null
        }
    ]
}

```

```

    },
    {
      "rel": "tenantPortal",
      "href": "https://jeff245.cloudpath.net/tenant?&auth=CPNENCv2%3ABC%7C88530494-E41F-4EF8-
BEDD-1A96DFA9290C%7CB5%2FiMYOkuyxBTSVgSy%2F5%2Fw%3D%3D%3A3rQugeksSTfzdb52C61WOW%3D
%3D&property=Property-40ac7e72-97ed-4567-a180-7d20967c5a72&api=osqQkqQ4GY91",
      "hreflang": null,
      "media": null,
      "title": null,
      "type": null,
      "deprecation": null
    },
    {
      "rel": "vxlanNetworkIdentifiers",
      "href": "https://jeff245.cloudpath.net/admin/publicApi/properties/
Property-40ac7e72-97ed-4567-a180-7d20967c5a72/units/Unit-0becd6f0-5305-4ae5-b390-61b6e40fa511/
vxlanNetworkIdentifiers",
      "hreflang": null,
      "media": null,
      "title": null,
      "type": null,
      "deprecation": null
    }
  ]
}
]
}

```

Registration Lists

You can use REST API 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 68 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.

TABLE 68 Resource: RegistrationList (continued)

Property Name	Type	Editable	Filter/Sort	Optional in Request/Response Body?	Description
behavior	String <Enum>	No	Neither	Yes	An enum describing the behavior of the plugin. Possible options are: <ul style="list-style-type: none"> PROMPT_WHEN_NO_MAC ALWAYS_PROMPT REDIRECT_WHEN_NO_MAC ALWAYS_REDIRECT DO_NOTHING_WHEN_NO_MAC
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"> self: a self-referencing link A linked list of child macRegistrations policies: List of policies assigned to a MAC registration list. rejectAttributeGroup: Name of the RADIUS attribute group, if assigned, to apply to the MAC registration list upon a RADIUS "reject" reply.

TABLE 69 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 70 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 71 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"> • SPECIFIED_DATE • 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
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 72 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
/registrationLists/{listGuid}/rejectAttributeGroup	GET	Returns the RADIUS Attribute Group assigned to this registration list upon a RADIUS "reject" reply.	404 - Not Found 401 - Unauthorized 200 - OK
	DELETE	Deletes the RADIUS Attribute Group that has been assigned to this registration list upon a RADIUS "reject" reply.	404 - Not Found 401 - Unauthorized 201 - No content 200 - OK
/registrationLists/{listGuid}/rejectAttributeGroup/{attributeGuid}	PUT	Maps the specified RADIUS Attribute Group to the MAC registration list upon a RADIUS "reject" reply.	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://Jeff245.cloudpath.net/admin/publicApi/registrationLists
```

where https://Jeff245.cloudpath.net/admin/publicApi is the root URI of the Cloudpath system being used (must include https, as shown).

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 73 Request Headers

Key	Value
Content-type	application/json
Authorization	eyJhbGciOiJIUzI1NiJ9.eyJzdWiiOiJqZWZmLnJob2RpZUBjb21tc2NvcGUuY29tIiwicm9sZVBrIjoiMjEwMDAiLCJhY2NvdW50QWRtaW5Qayl6IjIiLCJhcGILZXRkiOiJaV2NjTjGpQZUdZMGUuIiJpYXQiOiJlNzU1NzUxNTcsmV4cCl6MTU3NTU3NTQ1N30.2q4KTyDUevkAAz7mJyp529Be1-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.

NOTE

In this example, only one MAC registration list has been configured.

```
{
  "page": {
    "page": 1,
    "pageSize": 1,
    "totalCount": 1
  },
  "contents": [
    {
      "guid": "WorkflowRegistration-22510ec0-8f5e-435a-8765-7ce3d643e3fe",
      "name": "MAC Registration-8",
      "description": "",
      "sequence": 1,
      "ssidRegex": "",
      "expirationDateRule": {
        "type": "DAYS_AFTER_TIME",
        "offset": 1
      },
      "behavior": "ALWAYS_PROMPT",
      "promptInfo": {
        "title": "",
        "promptText": "",
        "macAddressLabel": "",
        "helpLinkCaption": "",
        "helpLinkUrl": "",
        "continueButtonLabel": "",
        "invalidMacErrorMessage": ""
      },
      "autoCleanup": false,
      "supportsPolicies": true,
      "defaultAccess": "ACCEPT",
      "links": [
        {
          "rel": "self",
          "href": "https://jeff245.cloudpath.net/admin/publicApi/registrationLists/WorkflowRegistration-22510ec0-8f5e-435a-8765-7ce3d643e3fe",
          "hreflang": null,
          "media": null,
          "title": null,
          "type": null,
          "deprecation": null
        },
        {
          "rel": "macRegistrations",
          "href": "https://jeff245.cloudpath.net/admin/publicApi/registrationLists/WorkflowRegistration-22510ec0-8f5e-435a-8765-7ce3d643e3fe/macRegistrations?page=1&pageSize=10{&filter,orderBy}",
          "hreflang": null,
          "media": null,
          "title": null,
          "type": null,
          "deprecation": null
        },
        {
          "rel": "policies",
          "href": "https://jeff245.cloudpath.net/admin/publicApi/registrationLists/WorkflowRegistration-22510ec0-8f5e-435a-8765-7ce3d643e3fe/policies?page=1&pageSize=100{&filter,orderBy}",
          "hreflang": null,
          "media": null,
          "title": null,
          "type": null,
          "deprecation": null
        }
      ]
    }
  ]
}
```

```
} ]  
}
```

Example of Using GET to Obtain RADIUS Attribute Group assigned to MAC Registration list on a RADIUS Reject

This example demonstrates how to obtain the name of the RADIUS attribute that has been assigned (this is optional) to a specified registration list upon a RADIUS "reject" reply. This example uses the REST API GET call.

URI:

This example uses the following URI:

```
https://Jeff245.cloudpath.net/admin/publicApi/registrationLists/  
WorkflowRegistration-22510ec0-8f5e-435a-8765-7ce3d643e3fe/rejectAttributeGroup
```

where:

- <https://Jeff245.cloudpath.net/admin/publicApi> is the root URI of the Cloudpath system being used (must include https, as shown).
- `WorkflowRegistration-22510ec0-8f5e-435a-8765-7ce3d643e3fe` is the ID of the MAC registration list

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.eyJzdWUiOiJqZWZmLnJob2RpZUBjb21tc2NvcGUuY29tliwicm9sZVBrijoiMjEwMDAiLCJhY2NvdW50QWRtaW5Qayl6ljIiLCJhcGILZkxiOiJaV2NjTGpQZUdZMGUuIiCjYXQiOiJlNzU1NzUxNTcsmV4cCl6MTU3NTU3NTQ1N30.2q4KTyDUevkAAz7mJyp529Be1-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.

```
{  
  "guid": "4",  
  "name": "Assign_upon_failure",  
  "description": "",  
  "vlanid": "",  
  "filterid": "",  
  "classid": "",  
  "sessionTimeout": "",  
  "policyCount": 0,  
  "additionalAttributes": [  
    {  
      "name": "Reply-Message",  
      "action": "ADD",  
      "value": "${ASSISTANCE_ID}"  
    },  
    {  
      "name": "Acct-Session-Id",
```

```

        "action": "ADD_MULTIPLE",
        "value": ""
    },
    {
        "name": "Acct-Session-Id",
        "action": "ADD_MULTIPLE",
        "value": ""
    }
],
"links": [
    {
        "rel": "self",
        "href": "https://jeff245.cloudpath.net/admin/publicApi/radiusAttributeGroups/4",
        "hreflang": null,
        "media": null,
        "title": null,
        "type": null,
        "deprecation": null
    }
]
}

```

MAC Registrations

You can use REST API 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 75 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	orderBy, like	No	The MAC address for this registration. Must be provided on a POST, and may not be changed.
status	Enum	Yes	orderBy, 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	orderBy, 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	orderBy, like	Yes	The email address to associate with this device.
location	String	No	orderBy, like	Yes	Location of the device.
deviceName	String	No	orderBy, like	Yes	The device name assigned to this registration .
expirationDate	String <date>	Yes	orderBy, 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.

TABLE 75 Resource: MacRegistration (continued)

Property Name	Type	Editable	Filter/Sort	Optional in Request/Response Body?	Description
lastSeenDate	String <date>	No	orderBy, 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"> self: links for each registration within the registration list parent: link to the registration list

TABLE 76 Resource: revokeInfo

Property Name	Type	Editable	Filter/Sort	Optional in Request/Response Body?	Description
date	String <date>	Yes	orderBy, like	No	The ISO 8601 date time that this registration was revoked.
reason	String	No	orderBy, like	No	The reason that the registration was revoked.
status	Enum	Yes	orderBy, 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 77 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

TABLE 77 MAC Registration URIs and Actions (continued)

URI	Action	Description	Return Codes
/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
/enrollments/{guid}/macRegistrations	GET	Returns the MAC registrations that belongs to the specified enrollment.	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/publicApi/registrationLists/WorkflowRegistration-2de79119-f1da-4b7e-84b8-b0482911cael/macRegistrations
```

where:

- https://Jeff243.cloudpath.net/admin/publicApi is the root URI of the Cloudpath system being used (must include https, as shown)
- WorkflowRegistration-2de79119-f1da-4b7e-84b8-b0482911cael 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 72](#) on page 106.

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 78 Request Headers

Key	Value
Content-type	application/json
Authorization	eyJhbGciOiJIUzI1NiJ9.eyJzdWIiOiJqZWZmLnJob2RpZUBjb21tc2NvcGUuY29tliwicm9sZVBrIjoiMjEwMDAiLCJhY2NvdW50QWRtaW5Qayl6IjIiLCJhcGILZkxiOiJhV2NjTGpQZUdZMGUilCjYXQiOiE1NzU1NzUxNTcsmV4cCl6MTU3NTU3NTQ1N30.2q4KTyDUevkAAz7mJyp529Be1-ip3EC8P06Xarmz5ao

Request Body:

No request body is required.

Action:

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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/publicApi/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/publicApi/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/publicApi/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/publicApi/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/publicApi/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/publicApi/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 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 79 Resource: Enrollment

Property Name	Type	Editable	Sort/Filter	Optional in Request/Response Body?	Description
guid	String	No	orderBy, like	No	The unique identifier for this enrollment..
status	enum <String>	Yes	orderBy, 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"> INITIATED - Enrollment has been started, SUBMITTED - Enrollment is proceeding through the wizard. APPROVED - The user or device has met the requirements. REJECTED - The user or device failed to meet the workflow requirements. ACTIVE - The enrollment has completed and was issued a certificate, PEAP, or DPSK. BLOCKED - The enrollment has been BLOCKED. ABANDONED - Certificate was never picked up. EXPIRED - The user/device has expired. COMPLETED_BEFORE_AUTHORIZATION - Did not finish authorization but reached a dead end.
createdDate	DateTime	No	orderBy	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	orderBy, like	Yes	The IP address for the enrollment agent.
macAddress	String	No	orderBy, like	Yes	The MAC address associated with the enrollment.
name	String	No	orderBy, like	Yes	The name of the user.
email	String	No	orderBy, like	Yes	The email address of the user, as specified by the authentication server.
location	String	No	orderBy, 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.
expirationDate	DateTime	No	orderBy	Yes	(ISO 8601) The date that this enrollment expires.
voucherApprovalDate	DateTime	No	orderBy	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.

TABLE 79 Resource: Enrollment (continued)

Property Name	Type	Editable	Sort/Filter	Optional in Request/Response Body?	Description
outputType	Enum <String>	No	orderBy, 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 80 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"> Changing an ACTIVE status to BLOCKED. Returning a BLOCKED status to ACTIVE. 	404 - Not found 401 - Unauthorized 200 - Ok
/enrollments/{guid}/dpsks	GET	Returns the list of DPSKS assigned during this enrollment process. NOTE The self-referencing link points back to: /enrollments/{guid}/	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/publicApi/enrollments
```

where https://Jeff245.cloudpath.net/admin/publicApi is the root URI of the Cloudpath system being used (must include https, as shown).

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 81 Request Headers

Key	Value
Content-type	application/json
Authorization	eyJhbGciOiJIUzI1NiIsInR5cGU6IjY9LmVudW50QWRtaW5QayI6IjEiLCJhcGILZXRkiOiJaV2NjTjGpQZUdZMGUilCjYXQXQjE1NzU1NzUxNTcslmV4cCl6MTU3NTU3NTQ1N3O.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/publicApi/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/publicApi/enrollments/Enrollment-4718fcaa-d04f-43c3-a3f0-6ef3af6b9d59/device",
          "hreflang": null,
          "media": null,
          "title": null,
          "type": null,
          "deprecation": null
        },
        {
          "rel": "dpsks",
          "href": "https://jeff245.cloudpath.net/admin/publicApi/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/publicApi/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/publicApi/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/publicApi/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/publicApi/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/publicApi/enrollments/
Enrollment-6178b32e-94c2-47ec-a9c4-5942b016cb19/dpsks",
            "hreflang": null,
            "media": null,
            "title": null,
            "type": null,
            "deprecation": null
        },
        {
            "rel": "macRegistrations",

```

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```
        "href": "https://jeff245.cloudpath.net/admin/publicApi/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/publicApi/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/publicApi/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/publicApi/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/publicApi/enrollments/
Enrollment-4ef63fa5-4429-40c0-a57e-43bb1eac1f65/dpsks",
            "hreflang": null,
            "media": null,
            "title": null,
            "type": null,
            "deprecation": null
        },
        {
            "rel": "macRegistrations",
            "href": "https://jeff245.cloudpath.net/admin/publicApi/enrollments/
Enrollment-4ef63fa5-4429-40c0-a57e-43bb1eac1f65/macRegistrations",
            "hreflang": null,
            "media": null,
            "title": null,
            "type": null,
            "deprecation": null
        }
    ]
}
```

```

        "deprecation": null
    },
    {
        "rel": "variables",
        "href": "https://jeff245.cloudpath.net/admin/publicApi/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/publicApi/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/publicApi/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/publicApi/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/publicApi/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/publicApi/enrollments/
Enrollment-73ca7a79-8f34-4735-b6e8-ac416580e417/variables",

```

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


Device

You can use REST API calls to obtain information about a device that gets registered during a 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 82 Resource: Device

Property Name	Type	Editable	Sort/Filter	Optional in Request/Response Body?	Description
name	String	No	orderBy, 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 83 Resource: OperatingSystem

Property Name	Type	Editable	Sort/Filter	Optional in Request/Response Body?	Description
name	String	No	orderBy, 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.
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.

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Enrollment Resources and URIs

TABLE 84 Resource: Nic

Property Name	Type	Editable	Sort/Filter	Optional in Request/Response Body?	Description
type	String	No	orderBy, 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 85 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/publicApi/enrollments/Enrollment-4718fcaa-d04f-43c3-a3f0-6ef3af6b9d59/device
```

where:

- <https://Jeff245.cloudpath.net/admin/publicApi> is the root URI of the Cloudpath system being used (must include https, as shown)
- Enrollment-4718fcaa-d04f-43c3-a3f0-6ef3af6b9d59 is the GUID of the enrollment

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 86 Request Headers

Key	Value
Content-type	application/json
Authorization	eyJhbGciOiJIUzI1NiJ9.eyJzdWIiOiJqZWZmLnJob2RpZUBjb21tc2NvcGUuY29tliwicm9sZVBrIjoimjEwMDAilCJhY2NvdW50QWRtaW5Qayl6IjIiLCJhcGILZXkiOiJhV2NjTGpQZUdZMGUilCJpYXQiOiJlNzU1NzUxNTcslmV4cCI6MTU3NTU3NTQ1N30u2q4KTyDUevkAAz7mJyp529Be1-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/publicApi/enrollments/Enrollment-4718fcaa-
d04f-43c3-a3f0-6ef3af6b9d59/device",
      "hreflang": null,
      "media": null,
      "title": null,
      "type": null,
      "deprecation": null
    },
    {
      "rel": "parent",
      "href": "/publicApi/enrollments/Enrollment-4718fcaa-d04f-43c3-a3f0-6ef3af6b9d59",
      "hreflang": null,
      "media": null,
      "title": null,
      "type": null,
      "deprecation": null
    }
  ]
}
```

Variables

You can use REST API 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 87 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 88 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 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 89 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 90 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/publicApi/system/smsCountryCodes
```

where https://Jeff245.cloudpath.net/admin/publicApi is the root URI of the Cloudpath system being used (must include https, as shown).

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 91 Request Headers

Key	Value
Content-type	application/json
Authorization	eyJhbGciOiJIUzI1NiJ9.eyJzdWiiOiJqZWZmLnJob2RpZUBjb21tc2NvcGUuY29tliwicm9sZVBrIjoibmJwMDAiLCJhY2NvdW50QWRtaW5Qayl6IjliLCJhcGILZXkiOiJhV2NjTjGpQZUdZMGUilCJpYXQiOiE1NzU1NzUxNTcsmV4cCl6MTU3NTU3NTQ1N30.2q4KTyDUevkAAz7mJyp529Be1-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/publicApi/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/publicApi/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/publicApi/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/publicApi/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 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 92 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 NOTE Sort order is as listed above, not alphabetical.

TABLE 92 Resource: Certificate Templates (continued)

Property Name	Type	Editable	Sort/Filter	Optional in Request/Response Body?	Description
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.
RADIUS Attribute Groups on page 30	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 93 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.
algorithm	String <Enum>	Yes	Neither	No	The algorithm, as dictated by the CA. <ul style="list-style-type: none"> • SHA-1: The SHA-1 hash • SHA-256: The SHA-2 hash using 256 bits • SHA-384: The SHA-2 hash using 384 bits • SHA-512: The SHA-2 hash using 512 bits
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.

TABLE 93 Resource: Onboard (continued)

Property Name	Type	Editable	Sort/Filter	Optional in Request/Response Body?	Description
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"> • 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. • 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.
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 94 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 94 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 95 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.

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TABLE 95 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 96 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 96 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 97 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: https://servername.domain.com/
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"> SHA-1: The SHA-1 hash SHA-256: The SHA-2 hash using 256 bits SHA-384: The SHA-2 hash using 384 bits SHA-512: The SHA-2 hash using 512 bits
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 98 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.

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TABLE 98 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 99 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 100 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 101 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/publicApi/certificateTemplates
```

where https://Jeff245.cloudpath.net/admin/publicApi is the root URI of the Cloudpath system being used (must include https, as shown).

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	eyJhbGciOiJIUzI1NiJ9.eyJzdWIiOiJqZWZmLnJob2RpZUBjb21tc2NvcGUuY29tliwicm9sZVBrIjoimjEwMDAiLCJhY2NvdW50QWRtaW5QayI6IjllLCJhcGILZXkiOiJaV2NjTGpQZUdZMGUilCJpYXQiOjE1NzU1NzUxNTcslmV4cCl6MTU3NTU3NTQ1N30.2q4KTyDUevkAAz7mJyp529Be1-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",
```

Core Cloudpath APIs

Certificate Templates and Related Resources

```
"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/publicApi/certificateTemplates/1",
    "hreflang": null,
    "media": null,
    "title": null,
    "type": null,
    "deprecation": null
  },
  {
    "rel": "certificates",
    "href": "https://jeff245.cloudpath.net/admin/publicApi/certificateTemplates/1/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/publicApi/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/publicApi/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/publicApi/certificateTemplates/2",
            "hreflang": null,
            "media": null,
            "title": null,
            "type": null,
            "deprecation": null
        }
    ]
}

```

Core Cloudpath APIs

Certificate Templates and Related Resources

```
    },
    {
      "rel": "certificates",
      "href": "https://jeff245.cloudpath.net/admin/publicApi/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/publicApi/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/publicApi/certificateTemplates/2/policies",
      "hreflang": null,
      "media": null,
      "title": null,
      "type": null,
      "deprecation": null
    }
  ]
}
```

Certificates

You can use REST API 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 103 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
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.

TABLE 103 Resource: Certificate (continued)

Property Name	Type	Editable	Sort/Filter	Optional in Request/Response Body?	Description
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 104 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.
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.

TABLE 104 Resource: RadiusUsage (continued)

Property Name	Type	Editable	Sort/Filter	Optional in Request/Response Body?	Description
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 OSCP. 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 105 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
/enrollments/{guid}/certificates	GET	Gets the list of certificates for the specified enrollment	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/publicApi/certificateTemplates/1/certificates
```

where:

- https://Jeff245.cloudpath.net/admin/publicApi is the root URI of the Cloudpath system being used (must include https, as shown)
- 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 106 Request Headers

Key	Value
Content-type	application/json
Authorization	eyJhbGciOiJIUzI1NiJ9.eyJzdWIiOiJqZWZmLnJob2RpZUBjb21tc2NvcGUuY29tliwicm9sZVBrJjoiMjEwMDAiLCJhY2NvdW50QWRtaW5Qayl6IjIiLCJhcGILZXRkiOiJaV2NjTGpQZUdZMGUuIjE1NzU1NzUxNTcslmV4cCl6MTU3NTU3NTQ1N30.2q4KTyDUevkAAz7mJyp529Be1-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": [

```

Core Cloudpath APIs

Certificate Templates and Related Resources

```
{
  "rel": "parent",
  "href": "https://jeff245.cloudpath.net/admin/publicApi/certificateTemplates/1",
  "hreflang": null,
  "media": null,
  "title": null,
  "type": null,
  "deprecation": null
},
{
  "rel": "self",
  "href": "https://jeff245.cloudpath.net/admin/publicApi/certificateTemplates/1/
certificates/1",
  "hreflang": null,
  "media": null,
  "title": null,
  "type": null,
  "deprecation": null
}
]
}
]
```

Msi Packages

You can use REST API 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 107 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.
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 108 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

Management Portal APIs

Management Portals

You can use REST API calls to obtain information about management portals, to create or edit management portals, and to delete management portals.

The following table lists the properties that can be used in the body of a management portal-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 109 Resource: Management Portal

Property Name	Type	Editable	Sort/Filter	Optional in Request/Response Body?	Description
guid	String	Yes	orderBy, like	Optional on create only, but not on any subsequent uses	The unique identifier for this management portal.
name	String	Yes	orderBy, like	No	The display name for this management portal; must be unique.
description	String	Yes	orderBy, like	Yes	A description for this management portal.
accessSecret	String	Yes	orderBy, like	No	The access secret that is used to log into this portal by an approved email address.
links self, properties, users, controlConfiguration, uiConfiguration	Link	No	orderBy, like-	Yes	This includes the following href links that can be used in other API calls: <ul style="list-style-type: none"> • self-referencing link • link to the controlConfiguration resource • link to the uiConfiguration resource • link to the list of properties associated with this management portal. • link to the list of users associated with this management portal.

TABLE 110 Resource: ControlConfiguration

Property Name	Type	Editable	Sort/Filter	Optional in Request/Response Body?	Description
createUnit	Boolean	No	Yes	No	Indicates if the user is allowed to create a unit on this property.
deleteUnit	boolean	No	Yes	No	Indicates if the user is allowed to delete a unit on this property
basicUnitProperties	boolean	No	Yes	No	Indicates if the user is allowed to alter the basic unit properties. This includes the name, description, and contact information for all units in the properties included in the management portal.
changeUnitSecrets	boolean	No	Yes	No	Indicates if the user is allowed to reset the wi-fi secret and guest wi-fi secret on the unit.
resetUnitAuthToken	boolean	No	Yes	No	Indicates if the user is allowed to set the unit state to "TOKEN_RESET", thereby resetting the tenant portal authentication token on the unit.
alterUnitState	boolean	No	Yes	No	Indicates if the user is allowed to change the basic state of the unit between ACTIVE/SUSPENDED.
setHelpText	boolean	No	Yes	No	Indicates if the user is allowed to set the help text for the tenant portal displayed for this property.
setAnnouncements	boolean	No	Yes	No	Indicates if the user is allowed to set the announcements for the tenant portal displayed for this property. .
links	Link	No	orderBy, like	Yes	Self referencing link and link to the parent management portal.

TABLE 111 Resource: UiConfiguration

Property Name	Type	Editable	Sort/Filter	Optional in Request/Response Body?	Description
title	String	Yes	No	Yes	The title to use in the management portal UI.
subtitle	String	Yes	No	Yes	The subtitle to use in the management portal UI.
loginText	String	Yes	No	Yes	Text to display when logging in to the management portal 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.
iconFileName	String	NO	No	Yes	The name of the icon file, if one has been uploaded. This will be updated when the icon file is changed via the icon file link.
links					logoFile, favicon, self, and parent (management portal)

Management Portal 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 112 Management Portal URIs and Actions

URI	Action	Description	Return Codes
/mgmtPortals	GET	Returns the list of management portals that are in the Cloudpath system.	401 - Unauthorized 200 - OK
	POST	Creates a management portal. Will return a conflict if the secret exists on another management portal defined in this account or if the name exists for another management portal defined in this account.	409 - Conflict 401 - Unauthorized 201 - Created
/mgmtPortals/{guid}	GET	Returns information about the specified management portal.	404 - Not Found 401 - Unauthorized 200 - OK
	DELETE	Deletes the management portal specified and all its associated data.	401 - Unauthorized 204 - No content 200 - OK
	PUT	Updates details about the management portal.	404 - Not Found 401 - Unauthorized 200 - OK
/mgmtPortals/{guid}/properties	GET	Returns the list of properties assigned to this management portal. Supports all of the sorting and filtering as defined by "property" in the core Cloudpath APIs.	404 - Not Found 401 - Unauthorized 200 - OK
/mgmtPortals/{guid}/properties/{propertyGuid}	PUT	Adds a property to the list of properties that are assigned to the specified management portal. This has no impact on the property itself.	404 - Not Found 401 - Unauthorized 200 - OK
	DELETE	Removes a property from the list of properties that have been assigned to the specified management portal. This has no impact on the property itself.	401 - Unauthorized 204 - No content 200 - OK
/mgmtPortals/{guid}/controlConfiguration	GET	Returns the control configuration information for the specified management portal. The control configuration specifies which APIs are accessible to users of this portal.	404 - Not Found 401 - Unauthorized 200 - OK
	PUT	Updates the control configuration information for the specified management portal.	404 - Not Found 401 - Unauthorized 200 - OK

TABLE 112 Management Portal URIs and Actions (continued)

URI	Action	Description	Return Codes
/mgmtPortals/{guid}/uiConfiguration	GET	Returns the UI configuration information for the specified management portal.	404 - Not Found 401 - Unauthorized 200 - OK
	PUT	Updates the UI configuration information for the specified management portal.	404 - Not Found 401 - Unauthorized 200 - OK
/mgmtPortals/{guid}/uiConfiguration/logoFile	POST	This method allows the user to post an image file that will be used for the management portal. Note that the media type in the headers of the POST must be <i>Multipart Form Data</i> . A null file can also be set if there is no desire for a logo file. If the file name is null, the logo file will be set to null regardless of the data in the form. If the form data is bad, a 422 message is thrown.	422 - Unprocessable Entity 404 - Not Found 401 - Unauthorized 200 - OK
/mgmtPortals/{guid}/uiConfiguration/favicon	POST	This method allows the user to post an icon file that will be used for the management portal. Note that the media type in the headers of the POST must be <i>Multipart Form Data</i> . A null file can also be set if there is no desire for an icon file. If the file name is null, the icon file will be set to null regardless of the data in the form. If the form data is bad, a 422 message is thrown.	422 - Unprocessable Entity 404 - Not Found 401 - Unauthorized 200 - OK

Example of Using GET for Management Portals

This example demonstrates how to obtain a listing of all management portals that have already been created in the Cloudpath UI.

URI:

This example uses the following URI:

```
https://Jeff245.cloudpath.net/admin/publicApi/mgmtPortals
```

where https://Jeff245.cloudpath.net/admin/publicApi is the root URI of the Cloudpath system being used (must include https, as shown).

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 113 Request Headers

Key	Value
Content-type	application/json
Authorization	eyJhbGciOiJIUzUxMiJ9.eyJhY2NvdW50UGsiOiJxliwicm9sZVBrIjoimjAwMDAiLCJhdWQiOiJSRVN1X0FQSSIsInN1YiI6IjEiLCJpc3MiOiJueEo5REV6aG1XUGJlSVZGaGR4Wm44cnh6aFhIR1AycmpOVHJxYndqSnhRPSlmlhdCl6MTYyODg5MTkwMiwZlXhwljoxNjI4ODkyMjAyfQ.yPA5OcUsfvkWTd298k-jvl-gCIE6fYEQ_dfl5mSAVYd5-iGsFEHwa_GTGOf4ahuKcPHVhQCWOpouJL5uHEwg

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 management portals in your Cloudpath system. In this example, "Lake View Apartments Management Portal" is the only existing management portal. The information in the response body will match the configuration of Lake View Apartments Management Portal 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": "MduPortalAccess-79293a33-262c-415b-8f0c-98ebc01eb503",
      "name": "Lake View Apartments Management Portal",
      "description": "",
      "accessSecret": "secret",
      "links": [
        {
          "rel": "self",
          "href": "https://jeff245.cloudpath.net/admin/publicApi/mgmtPortals/MduPortalAccess-79293a33-262c-415b-8f0c-98ebc01eb503",
          "hreflang": null,
          "media": null,
          "title": null,
          "type": null,
          "deprecation": null
        },
        {
          "rel": "property",
          "href": "https://jeff245.cloudpath.net/admin/publicApi/mgmtPortals/MduPortalAccess-79293a33-262c-415b-8f0c-98ebc01eb503/properties?page=1&pageSize=10{&filter,orderBy}",
          "hreflang": null,
          "media": null,
          "title": null,
          "type": null,
          "deprecation": null
        },
        {
          "rel": "uiConfiguration",
          "href": "https://jeff245.cloudpath.net/admin/publicApi/mgmtPortals/MduPortalAccess-79293a33-262c-415b-8f0c-98ebc01eb503/uiConfiguration",
          "hreflang": null,
          "media": null,
          "title": null,
          "type": null,
          "deprecation": null
        },
        {
          "rel": "controlConfiguration",
          "href": "https://jeff245.cloudpath.net/admin/publicApi/mgmtPortals/MduPortalAccess-79293a33-262c-415b-8f0c-98ebc01eb503/controlConfiguration",
          "hreflang": null,
          "media": null,
          "title": null,
          "type": null,
          "deprecation": null
        },
        {
          "rel": "users",
```

Core Cloudpath APIs
Management Portal APIs

```

        "href": "https://jeff245.cloudpath.net/admin/publicApi/mgmtPortals/
MduPortalAccess-79293a33-262c-415b-8f0c-98ebc01eb503/users?page=1&pageSize=10{&filter,orderBy}",
        "hreflang": null,
        "media": null,
        "title": null,
        "type": null,
        "deprecation": null
    }
}
]
}

```

Example of Using POST to Create a Management Portal

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

URI:

This example uses the following URI:

```
https://Jeff245.cloudpath.net/admin/publicApi/mgmtPortals
```

where https://Jeff245.cloudpath.net/admin/publicApi is the root URI of the Cloudpath system being used (must include https, as shown).

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 114 Request Headers

Key	Value
Content-type	application/json
Authorization	eyJhbGciOiJIUzUxMiJ9.eyJhY2NvdW50UGsiOiIxliwicm9sZVBrJoiMjAwMDAiLCJhdWQiOiJSRVNlN0FQSSIsInN1YiI6IjEiLCJpc3MiOiJueEo5REV6aG1XUGJlSVZGaGR4Wm44cnh6aFhR1AycmpOVHJxYndqShhRPSlslmhdCl6MTYyODg5MTkwMiwZhwjoxNjI4ODkyMjAyfQ.yPA5OcUsvfkWtD298k-jvl-gCIE6fYEQ_dfl5mSAVYd5-iGsFEHwa_GTGOOf4ahuKcPHVhQCWOpoiUjL5uHEwg

Request Body:

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

```

{
  "name": "Green Buildings Management Portal",
  "description": "Management portal for the Green Buildings Construction Group",
  "accessSecret": "secret22"
}

```

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 management portal) is included in the response body.

```

{
  "guid": "MduPortalAccess-71891b0f-1b27-472a-8a9e-1fe21e21belf",
  "name": "Green Buildings Management Portal",
  "description": "Management portal for the Green Buildings Construction Group",
  "accessSecret": "secret22",
}

```

```

"links": [
  {
    "rel": "self",
    "href": "https://jeff245.cloudpath.net/admin/publicApi/mgmtPortals/
MduPortalAccess-71891b0f-1b27-472a-8a9e-1fe21e21belf",
    "hreflang": null,
    "media": null,
    "title": null,
    "type": null,
    "deprecation": null
  },
  {
    "rel": "property",
    "href": "https://jeff245.cloudpath.net/admin/publicApi/mgmtPortals/
MduPortalAccess-71891b0f-1b27-472a-8a9e-1fe21e21belf/properties?page=1&pageSize=10{&filter,orderBy}",
    "hreflang": null,
    "media": null,
    "title": null,
    "type": null,
    "deprecation": null
  },
  {
    "rel": "uiConfiguration",
    "href": "https://jeff245.cloudpath.net/admin/publicApi/mgmtPortals/
MduPortalAccess-71891b0f-1b27-472a-8a9e-1fe21e21belf/uiConfiguration",
    "hreflang": null,
    "media": null,
    "title": null,
    "type": null,
    "deprecation": null
  },
  {
    "rel": "controlConfiguration",
    "href": "https://jeff245.cloudpath.net/admin/publicApi/mgmtPortals/
MduPortalAccess-71891b0f-1b27-472a-8a9e-1fe21e21belf/controlConfiguration",
    "hreflang": null,
    "media": null,
    "title": null,
    "type": null,
    "deprecation": null
  },
  {
    "rel": "users",
    "href": "https://jeff245.cloudpath.net/admin/publicApi/mgmtPortals/
MduPortalAccess-71891b0f-1b27-472a-8a9e-1fe21e21belf/users?page=1&pageSize=10{&filter,orderBy}",
    "hreflang": null,
    "media": null,
    "title": null,
    "type": null,
    "deprecation": null
  }
]
}

```

Verifying the Newly Created Management Portal in the Cloudpath UI:

You can go to the **Managed Access > Management Portal** area of the UI to confirm that the portal was created correctly.

Example of Using PUT to Change Default Portal Controls of a Management Portal

This example demonstrates how to change the portal controls of a management portal in your Cloudpath system by using the REST API PUT call.

URI:

This example uses the following URI:

```

https://Jeff245.cloudpath.net/admin/publicApi/mgmtPortals/
MduPortalAccess-71891b0f-1b27-472a-8a9e-1fe21e21belf/controlConfiguration

```

where:

- <https://Jeff245.cloudpath.net/admin/publicApi> is the root URI of the Cloudpath system being used (must include https, as shown).
- `MduPortalAccess-71891b0f-1b27-472a-8a9e-1fe21e21be1f` is the GUID of the management portal.

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	eyJhbGciOiJIUzUxMiJ9.eyJhY2NvdW50UGsiOiIiX2liwcm9sZVBrIjoibWJAwMDAilCJhdWQiOiJlSRVNUX0FQSSIsInN1YiI6IjEiLCJpc3MiOiJueEo5REV6aG1XUGJlSVZGaGR4Wm44cnh6aFhIR1AycmpOVHJxYndqSnhRPSlmlhdCl6MTYyODg5MTRkwMiwiZXhwIjoxNjI4ODkyMjA5fQ.yPA5OCUsfvkWTd298k-jvl-gCIE6fYEQ_df15mSAVYd5-iGsFEHwa_GTGOf4ahuKcPHVhhQCWOpoiUjL5uHEwg

Request Body:

The following is an example of a request body of a PUT request for portal controls. You can refer to the ControlConfiguration resource table earlier in this topic for a list and descriptions of properties you can change.

NOTE

Your request body must contain all portal control properties and the boolean value you desire for each one, even for properties whose values you wish to remain as currently configured.

For instance, in this example, you are setting only the portal controls *deleteUnit* and *resetUnitAuthToken* to true.

```
{
  "createUnit": false,
  "deleteUnit": true,
  "basicUnitProperties": false,
  "changeUnitSecrets": false,
  "resetUnitAuthToken": true,
  "alterUnitState": false,
  "setHelpText": false,
  "setAnnouncements": false}
```

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. The response body below indicates that the request successfully set the values as specified.

```
{
  "createUnit": false,
  "deleteUnit": true,
  "basicUnitProperties": false,
  "changeUnitSecrets": false,
  "resetUnitAuthToken": true,
  "alterUnitState": false,
  "setHelpText": false,
  "setAnnouncements": false,
  "links": [
    {
      "rel": "self",
      "href": "https://jeff245.cloudpath.net/admin/publicApi/mgmtPortals",
      "hreflang": null,
      "media": null,
      "title": null,
      "type": null,
```

```

        "deprecation": null
    },
    {
        "rel": "mgmtPortal",
        "href": "https://jeff245.cloudpath.net/admin/publicApi/mgmtPortals/
MduPortalAccess-71891b0f-1b27-472a-8a9e-1fe21e21be1f",
        "hreflang": null,
        "media": null,
        "title": null,
        "type": null,
        "deprecation": null
    }
]
}

```

Verifying the Changes in the Management Portal in the Cloudpath UI:

You can go to the **Managed Access > Management Portal** area of the UI, then click the wrench icon for the portal, then view the "Portal Controls" properties in the Access Details tab to confirm that the changes took effect.

Management Portal Users

You can use REST API calls to obtain information about management portal users, to create or edit management portal users, and to delete management portal users.

Users who are provided with the management portal access secret are permitted to access the management portal API and the Cloudpath management portal. They must have a unique email which will allow limited auditing. For information about configuring management portals and their users, refer to the *Cloudpath ES Property Management Configuration Guide*.

The following table lists the properties that can be used in the body of a management portal 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 116 Resource: User

Property Name	Type	Editable	Sort/Filter	Optional in Request/Response Body?	Description
guid	String	No	both	No*	The unique identifier for this User. * Does not need to be provided on a POST but needs to be provided in all other cases, and will always be returned.
name	String	Yes	both	No	The display name for this Users,
description	String	Yes	both	Yes	A description of the user.
email	String	No	Neither	Yes	The unique email for this user. It must be unique per management portal.
links	Link	No	No	Yes	self, parent (management portal)

Management Portal User 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 117 Management Portal User URIs and Actions

URI	Action	Description	Return Codes
/mgmtPortals/{portal_guid}/users	GET	Returns the list of users that have been assigned to the specified management portal in the Cloudpath system.	401 - Unauthorized 200 - OK
	POST	Creates a user for the specified management portal.	401 - Unauthorized 201 - Created
/mgmtPortals/{portal_guid}/users {guid}	GET	Returns information about the specified user for the specified management portal.	404 - Not Found 401 - Unauthorized 200 - OK
	DELETE	Deletes the specified user from the list of permitted user for this management portal.	401 - Unauthorized 204 - No content 200 - OK
	PUT	Updates details about the specified user. A "409 - Conflict" message is returned if the email requested already exists in the list of users that have been assigned to this management portal.	409 - Conflict 404 - Not Found 401 - Unauthorized 200 - OK

Example of Using GET for Management Portal Users

This example demonstrates how to obtain a listing of all users that have been assigned to a specified management portal that has already been created in the Cloudpath UI.

URI:

This example uses the following URI:

```
https://Jeff245.cloudpath.net/admin/publicApi/mgmtPortals/  
MduPortalAccess-79293a33-262c-415b-8f0c-98ebc01eb503/users
```

where:

- https://Jeff245.cloudpath.net/admin/publicApi is the root URI of the Cloudpath system being used (must include https, as shown).
- MduPortalAccess-79293a33-262c-415b-8f0c-98ebc01eb503 is the GUID of the management portal.

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 118 Request Headers

Key	Value
Content-type	application/json
Authorization	eyJhbGciOiJIUzUxMiJ9.eyJhY2NvdW50UGsiOiIxlwiwcm9sZVBrJoiMjAwMDAiLCJhdWQiOiJSRVN1UX0FQSSIsInN1YiI6IjEiLCJpc3MiOiJueEo5REV6aG1XUGJlSVZGaGR4Wm44cnh6aFhR1AycmpOVHJxYndqSnhRPSlslmhdCl6MTYyODg5MTkwMiwZlXhwljoxNjI4ODkyMjAyfQ.yPA5OcUsvfkWtD298k-jvl-gCIE6fYEQ_dfl5mSAVYd5-iGsFEHwa_GTGOf4ahuKcPHVhQCWOPoiUjL5uHEwg

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 users who have been assigned to the management portal that you specified in the GET request, as shown in the following example.

```
{
  "page": {
    "page": 1,
    "pageSize": 2,
    "totalCount": 2
  },
  "contents": [
    {
      "guid": "MduPortalAccessUser-ae875acd-005e-4112-a320-9d19be692121",
      "name": "Jeff",
      "description": "Backup property manager with full permissions\t",
      "email": "jeff@commscope.com",
      "links": [
        {
          "rel": "self",
          "href": "https://jeff245.cloudpath.net/admin/publicApi/mgmtPortals/
MduPortalAccess-79293a33-262c-415b-8f0c-98ebc01eb503/users/MduPortalAccessUser-ae875acd-005e-4112-
a320-9d19be692121",
          "hreflang": null,
          "media": null,
          "title": null,
          "type": null,
          "deprecation": null
        },
        {
          "rel": "mgmtPortal",
          "href": "https://jeff245.cloudpath.net/admin/publicApi/mgmtPortals/
MduPortalAccess-79293a33-262c-415b-8f0c-98ebc01eb503",
          "hreflang": null,
          "media": null,
          "title": null,
          "type": null,
          "deprecation": null
        }
      ]
    },
    {
      "guid": "MduPortalAccessUser-b1902748-aeb7-44f1-8aee-5cfec0287ce6",
      "name": "J. Smith",
      "description": "Property Manager for Lake View Apartments\t",
      "email": "js@laptops.com",
      "links": [
        {
          "rel": "self",
          "href": "https://jeff245.cloudpath.net/admin/publicApi/mgmtPortals/
MduPortalAccess-79293a33-262c-415b-8f0c-98ebc01eb503/users/MduPortalAccessUser-b1902748-
aeb7-44f1-8aee-5cfec0287ce6",
          "hreflang": null,
          "media": null,
          "title": null,
          "type": null,
          "deprecation": null
        },
        {
          "rel": "mgmtPortal",
          "href": "https://jeff245.cloudpath.net/admin/publicApi/mgmtPortals/
MduPortalAccess-79293a33-262c-415b-8f0c-98ebc01eb503",
          "hreflang": null,
          "media": null,
          "title": null,
          "type": null,
          "deprecation": null
        }
      ]
    }
  ]
}
```

```
}  
  ]  
}  
]
```

Integrated Systems

You can use REST API calls to return the list of integrated systems that have been established with Cloudpath.

The following table lists the properties that can be used in the body of an integrated-system-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 119 Resource: Integrated System

Property Name	Type	Editable	Sort/Filter	Optional in Request/Response Body?	Description
displayName	String	Yes	both	No	The display name for this integrated system.
description	String	Yes	both	Yes	A description of this integrated system.
host	String	Yes	both	No	Hostname/IP Address of the integrated system.
type	String<Enum >	No	both	No	The type of integrated system.
link	Link	No	No	No	Self- referencing link.

Integrated System 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 120 Integrated System URIs and Actions

URI	Action	Description	Return Codes
/integratedSystems	GET	Returns the list of integrated systems that have been established with Cloudpath	401 - Unauthorized 200 - OK

Example of Using GET for Integrated Systems

This example demonstrates how to obtain information about integrated systems with Cloudpath UI.

URI:

This example uses the following URI:

```
https://nsg192.cloudpath.net/admin/publicApi/integratedSystems
```

where <https://nsg192.cloudpath.net/admin/publicApi> is the root URI of the Cloudpath system being used (must include https, as shown).

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 121 Request Headers

Key	Value
Content-type	application/json
Authorization	eyJhbGciOiJIUzUxMiJ9.eyJhY2NvdW50UGsiOiIxMSIsInJvbGVQayl6IiwMDAwliwiYXVkljoiUkVTVF9BUeKiLCJzdWliOiI0NyIsImZcyYl6IiwiaWVudCI6ImVIZlR0bWVudC11T0VWpYcndKYk53ODRvclxZUJQlhtb009liwiaWF0IjoxNjYyNjA3ODM5LCJleHAiOiJlMjMDgxmZl9r-UU4CA-h2FxQ8udq6krH1kly9JyVy9SbnsYbzHmA6yC_oMPFfQpUavlb23RkAlPLk9E8bnye7vZ3BxQAWf4wA

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 integrated systems in your Cloudpath system. In this example, the host with IP address of 10.10.10.10 is the only integrated system. The information in the response body will match the configuration of the integrated system as specified in the Cloudpath UI.

```
{
  "page": {
    "page": 1,
    "pageSize": 1,
    "totalCount": 1
  },
  "contents": [
    {
      "displayName": "ray@arris.com",
      "description": "",
      "host": "10.10.10.10",
      "type": "SZ_NET_SEGMENTATION",
      "links": [
        {
          "rel": "self",
          "href": "https://nsg192.cloudpath.net/admin/publicApi/integratedSystems/239",
          "hreflang": null,
          "media": null,
          "title": null,
          "type": null,
          "deprecation": null
        }
      ]
    }
  ]
}
```

SmartZone Network Segmentation

You can use REST API calls to create, or return information about, a SmartZone integrated system that has been established with Cloudpath.

NOTE

The SmartZone network segmentation resource represents the connection between Cloudpath and a RUCKUS SmartZone controller supporting network segmentation. Only a single integrated system is permitted here; therefore the URIs do not require a GUID, and only the HTTP verbs POST, GET, and DELETE are supported.

The following table lists the properties that can be used in the body of a SmartZone network segmentation-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 122 Resource: **SzNetworkSegmentation**

Property Name	Type	Editable	Sort/Filter	Optional in Request/Response Body?	Description
displayName	String	Yes	none	No	The display name for this SmartZone Network Segmentation integrated system
description	String	Yes	none	Yes	A description for this SmartZone Network Segmentation integrated system
status	String <Enum>	Yes	none	No	An enumeration that represents the status of the integration with SmartZone. The status values are: ESTABLISHED, CP_AUTH_FAIL, SZ_AUTH_FAIL, SZ_CONN_FAIL, SZ_INVALID_REQUEST, SZ_LOGON_FAIL, SZ_CERT_VERIFY_FAIL, SZ_CONNECTED_ANOTHER_CP, UNKNOWN If the status is NOT established and a POST is performed that changes the status, this request triggers an attempt to reconnect to SmartZone. The status updates, based on the results of that connection attempt.
hostName	String	Yes	none	No	The hostname of the SmartZone instance.
port	Number	Yes	none	No	The port for the SmartZone APIs,
userName	String	Yes	none	No	A username on SmartZone that is permitted to access the APIs.
password	String	Yes	none	No	The password for the defined user.
link	Link	No	No	No	Self-referencing link

Integrated System 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 123 Integrated System URIs and Actions

URI	Action	Description	Return Codes
/integratedSystems/smartZoneNetSeg	GET	Returns the SmartZone Network Segmentation Integrated System, if one has been established. Will return "NotFound" if there is no established integrated system.	404 - Not Found 401 - Unauthorized 200 - OK
	POST	Creates or updates the SmartZone Network Segmentation Integrated System. Will return a 201 code if created, or a 200 if updated. The body includes the details.	401 - Unauthorized 201 - Created 200 - OK
	DELETE	Deletes the SmartZone Network Segmentation Integrated System.	500 - Internal Server Error (for example, pool in use) 401 - Unauthorized 204 - No content 200 - OK

Example of Using GET for Integrated Systems

This example demonstrates how to obtain information about a SmartZone integrated system with Cloudpath UI.

URI:

This example uses the following URI:

```
https://nsg192.cloudpath.net/admin/publicApi/integratedSystems
```

where `https://nsg192.cloudpath.net/admin/publicApi` is the root URI of the Cloudpath system being used (must include `https`, as shown).

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 124 Request Headers

Key	Value
Content-type	application/json
Authorization	eyJhbGciOiJIUzUxMiJ9.eyJhY2NvdW50UGsiOiIxMSIsInJvbGVQayI6IjIwMDAwIiwiaWF0IjoiUkVTVF9BUEkiLCJzdWIiOiI0NyIsImZyY2Vybm91dCI6IjE2MDgxMzI9Lr-UU4CA-h2FxQ8udq6krH1kly9JyVy9SbnsYbzHmA6yC_oMPFfQpUavlb23RkAlPLk9E8bnye7vZ3BxQAWf4wA

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 integrated system in your Cloudpath system. In this example, the integrated system has an IP address of 10.10.10.10.

```
{
  "displayName": "nsg@arris.com",
  "description": "",
  "host": "10.10.10.10",
  "type": "SZ_NET_SEGMENTATION",
  "status": "Established",
  "port": "8443",
  "userName": "admin",
  "password": "sqa4ruckus!",
  "links": [
    {
      "rel": "self",
      "href": "https://nsg192.cloudpath.net/admin/publicApi/integratedSystems/smartZoneNetSeg",
      "hreflang": null,
      "media": null,
      "title": null,
      "type": null,
      "deprecation": null
    }
  ]
}
```

Network Segmentation Groups

Network Segmentation Groups

You can use REST API calls to obtain information about existing network segmentation groups and their properties.

The following table lists the properties that can be used in the body of a network-segmentation-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 125 Resource: networkSegmentationGroups

Property Name	Type	Editable	Sort/Filter	Optional in Request/Response Body?	Description
guid	String	No	orderBy, like	No	The unique identifier for this network segmentation group as provided on creation. (This is the value from SmartZone.)
name	String	Yes	orderBy, like	No	The display name for this network segmentation group.
description	String	Yes	orderBy, like	Yes	A description for this network segmentation group.
vniRange	VniRange <Embedded Object>	Yes	None	N	The VNI range for this network segmentation group. This is used by Cloudpath to generate the list of VNIs which belong to this group. This is an inclusive range as defined in the resource "VniRange" (described in the Resource table below).
status	String <Enum>	Yes	None	No	The current status of this Network Segmentation Group Current status is; ACTIVE, OUT_OF_SYNC, CONNECTION_ERROR, SYNCHRONIZING, SYNCHRONIZE
links self, properties, vxlanNetworkIdentifiers, accessPoints	Link	No	orderBy, like	No	Self referencing link, vxlanNetworkIdentifiers, the assigned properties, and accessPoints.

TABLE 126 Resource: VniRange

Property Name	Type	Editable	Sort/Filter	Optional in Request/Response Body?	Description
firstVni	Long	Yes	None	No	The first VNI to allow, inclusive to the last VNI.
lastVni	Long	Yes	None	No	The last VNI to use.

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 127 Property URIs and Actions

URI	Action	Description	Return Codes
/networkSegmentationGroups	GET	Returns the list of network segmentation groups that are in Cloudpath. If the Cloudpath server has not been correctly configured for SmartZone integration, this URI generates a "403 - Forbidden" message.	200- OK 401 - Unauthorized 403 - Forbidden
/networkSegmentationGroups/{guid}	GET	Returns information about the specified network segmentation group. If the Cloudpath server has not been correctly configured for SmartZone integration, this URI generates a "403 - Forbidden" message.	200- OK 404 - Not Found 401 - Unauthorized 403 - Forbidden
/networkSegmentationGroups/{guid}/properties	GET	The list of properties that have been assigned to this network segmentation group. If the Cloudpath server has not been correctly configured for SmartZone integration, this URI generates a "403 - Forbidden" message.	200- OK 404 - Not Found 401 - Unauthorized 403 - Forbidden
/networkSegmentationGroups/system	GET	Returns the system information for the Network Segmentation Groups.	
	PUT	Allows a change of status for the Network Segmentation Groups.	

Example of Using GET for networkSegmentationGroups

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

URI:

This example uses the following URI:

`https://Jeff245.cloudpath.net/admin/publicApi/networkSegmentationGroups`

where `https://Jeff245.cloudpath.net/admin/publicApi` is the root URI of the Cloudpath system being used (must include https, as shown).

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 128 Request Headers

Key	Value
Content-type	application/json
Authorization	eyJhbGciOiJIUzI1NiJ9.eyJzdWIiOiJqZWZmLnJob2RpZUBjb21tc2NvcGUuY29tliwicm9sZVBrJoiMjEwMDAiLCJhY2NvdW50QWRtaW5Qayl6IjIiLCJhcGILZXRkiOiJaV2NjTGpQZUdZMGUilCjYXQjE1NzU1NzUxNTcsmV4cCl6MTU3NTU3NTQ1N30.2q4KTyDUevkAAz7mJyp529Be1-ip3EC8P06Xarmz5ao

Request Body:

None required.

Action:

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

Response Body:

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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 network segmentation groups in your Cloudpath system. In this example, only one network segmentation group, named "chris-1", exists.

```
{
  "page": {
    "page": 1,
    "pageSize": 1,
    "totalCount": 1
  },
  "contents": [
    {
      "guid": "felblea8-87c0-467f-9b9f-7827f576cd82",
      "name": "chris-1",
      "vniRange": {
        "firstVni": 2000000,
        "lastVni": 2001000
      },
      "status": "ACTIVE",
      "links": [
        {
          "rel": "self",
          "href": "https://jeff245.cloudpath.net/admin/publicApi/networkSegmentationGroups/felblea8-87c0-467f-9b9f-7827f576cd82",
          "hreflang": null,
          "media": null,
          "title": null,
          "type": null,
          "deprecation": null
        },
        {
          "rel": "property",
          "href": "https://jeff245.cloudpath.net/admin/publicApi/networkSegmentationGroups/felblea8-87c0-467f-9b9f-7827f576cd82/properties?page=1&pageSize=10{&filter,orderBy}",
          "hreflang": null,
          "media": null,
          "title": null,
          "type": null,
          "deprecation": null
        },
        {
          "rel": "vxlanNetworkIdentifiers",
          "href": "https://jeff245.cloudpath.net/admin/publicApi/networkSegmentationGroups/felblea8-87c0-467f-9b9f-7827f576cd82/vxlanNetworkIdentifiers?page=1&pageSize=10{&filter,orderBy}",
          "hreflang": null,
          "media": null,
          "title": null,
          "type": null,
          "deprecation": null
        },
        {
          "rel": "accessPoints",
          "href": "https://jeff245.cloudpath.net/admin/publicApi/networkSegmentationGroups/felblea8-87c0-467f-9b9f-7827f576cd82/accessPoints?page=1&pageSize=10{&filter,orderBy}",
          "hreflang": null,
          "media": null,
          "title": null,
          "type": null,
          "deprecation": null
        }
      ]
    }
  ]
}
```

Example of Using GET to Obtain a List of Properties for a Specific networkSegmentation Group

This example demonstrates how to obtain the list of properties that have been assigned to a specific networkSegmentation group.

URI:

This example uses the following URI:

```
https://Jeff245.cloudpath.net/admin/publicApi/networkSegmentationGroups/fe1blea8-87c0-467f-9b9f-7827f576cd82/properties
```

where: .

- <https://Jeff245.cloudpath.net/admin/publicApi> is the root URI of the Cloudpath system being used (must include https, as shown)
- fe1b1ea8-87c0-467f-9b9f-7827f576cd82 is the GUID of the networkSegmentation group

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 129 Request Headers

Key	Value
Content-type	application/json
Authorization	eyJhbGciOiJIUzI1NiJ9.eyJzdWiiOiJqZWZmLnJob2RpZUBjb21tc2NvcGUuY29tIiwicm9sZVBrIjoiaWJwMDAiLCJhY2NvdW50QRtaW5QayI6IjIiLCJhcGILZXRkiOiJaV2NjTjGpQZUdZMGUilCjYXQiOiJE1NzU1NzUxNTcsImV4cCl6MTU3NTU3NTQ1N3O.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 "200 OK" if the GET is successful. In this example, only one property, named "Tech Pubs Building 1", is currently assigned to the network segmentation group.

```
{
  "page": {
    "page": 1,
    "pageSize": 1,
    "totalCount": 1
  },
  "contents": [
    {
      "guid": "Property-40ac7e72-97ed-4567-a180-7d20967c5a72",
      "name": "Tech Pubs Building 1 ",
      "address": "001 Tech Pubs Road\r\nLake Town, CA",
      "description": "",
      "enforceMaxUnits": false,
      "maxUnits": 0,
      "allowSeparateGuestSecret": true,
      "ssids": [
        "Jeff eDPSK"
      ],
      "managementName": "Sushma A",
      "managementPhone": "0005550200",
      "managementEmail": "sushma@commscope.com",
      "tenantPortalHelpText": "",
      "tenantPortalAnnouncements": "",
      "sendEmail": true,
      "sendSms": true,
      "smsPassphraseChange": "",
      "emailPassphraseSubject": "",
      "emailPassphraseChange": "",
      "smsAssignedUnit": "",
      "emailAssignedUnitSubject": ""
    }
  ]
}
```

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```
    "emailAssignedUnit": "",
    "links": [
      {
        "rel": "self",
        "href": "https://jeff245.cloudpath.net/admin/publicApi/properties/Property-40ac7e72-97ed-4567-a180-7d20967c5a72",
        "hreflang": null,
        "media": null,
        "title": null,
        "type": null,
        "deprecation": null
      },
      {
        "rel": "uiConfiguration",
        "href": "https://jeff245.cloudpath.net/admin/publicApi/properties/Property-40ac7e72-97ed-4567-a180-7d20967c5a72/uiConfiguration",
        "hreflang": null,
        "media": null,
        "title": null,
        "type": null,
        "deprecation": null
      },
      {
        "rel": "dpskPool",
        "href": "https://jeff245.cloudpath.net/admin/publicApi/dpskPools/AccountDpskPool-390c47b8-5c61-4d06-bb9b-6693c65db8b6",
        "hreflang": null,
        "media": null,
        "title": null,
        "type": null,
        "deprecation": null
      },
      {
        "rel": "units",
        "href": "https://jeff245.cloudpath.net/admin/publicApi/properties/Property-40ac7e72-97ed-4567-a180-7d20967c5a72/units?page=1&pageSize=10{&filter,orderBy}",
        "hreflang": null,
        "media": null,
        "title": null,
        "type": null,
        "deprecation": null
      },
      {
        "rel": "networkSegmentationGroups",
        "href": "https://jeff245.cloudpath.net/admin/publicApi/properties/Property-40ac7e72-97ed-4567-a180-7d20967c5a72/networkSegmentationGroups?page=1&pageSize=10{&filter,orderBy}",
        "hreflang": null,
        "media": null,
        "title": null,
        "type": null,
        "deprecation": null
      }
    ]
  }
}
```

Access Points

You can use REST API calls to obtain information about access points being used in your network segmentation groups.

Access points in a network segmentation group are assigned to a unit. When an access point is assigned to a unit, the system locates an available VNI, and assigns that VNI to the unit. If a free port exists, the system assigns that VNI to a port. Any changes to the VNI assignment must be done from the unit. For more information, refer to the *RUCKUS SmartZone and Cloudpath Network Segmentation Configuration Guide*.

The following table lists the properties that can be used in the body of an AccessPoint-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 130 Resource: AccessPoint

Property Name	Type	Editable	Sort/Filter	Optional in Request/Response Body?	Description
guid	String	No	orderBy, like	No	The unique identifier for this AP.
szName	String	No*	orderBy, like	No*	The name that SmartZone has assigned to this AP.
description	String	Yes	orderBy, like	Yes	The description that the Cloudpath user has assigned to this AP.
serialNumber	String	No*	orderBy, like	No*	The serial number for this AP.
macAddress	String	No*	orderBy, like	No*	The MAC address for this AP. Must be formatted with colon separators, as in the following example: 01:23:45:67:89:AB This will be validated on creation.
model	String	No*	orderBy, like	No*	The model for this AP.
ethernetPorts	List <EthernetPort>	Yes*		No	The list of ethernet ports on this AP. When a VNI is assigned to a unit that has an assigned AP and an available port, Cloudpath assigns a VNI to the open port.
links, self, networkSegmentationGroups	Link	Yes*	No.	No*	Self referencing link, units assigned, the parent networkSegmentationGroups for thisAP.

TABLE 131 Resource: Ethernet Port

Property Name	Type	Editable	Sort/Filter	Optional in Request/Response Body?	Description
portName	String	No*	orderBy, like	No	The port name. This name cannot be changed once it is created.
portIndex	number	No*	orderBy, like	No	The port index number. It cannot be changed once created.
links, accessPoint, vxlanNetworkIdentifier	Link	No	None	No*	If this ethernet port has been assigned a VNI, the link to that vxlanNetworkIdentifier is provided. The parent access point link is also provided if the port is listed directly and not within the ethernet resource.

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 132 Property URIs and Actions

URI	Action	Description	Return Codes
/networkSegmentationGroups/{groupGuid}/accessPoints	GET	Returns the list of APs that are in this networkSegmentationGroup (with paging and sorting and filtering). If the Cloudpath server has not been correctly configured for SmartZone integration, this URI generates a "403 - Forbidden" message.	200- OK 401 - Unauthorized 403 - Forbidden 404 - Not Found

TABLE 132 Property URIs and Actions (continued)

URI	Action	Description	Return Codes
/networkSegmentationGroups/{groupGuid}/accessPoints/{guid}	GET	Returns information about the specified AP. If the Cloudpath server has not been correctly configured for SmartZone integration, this URI generates a "403 - Forbidden" message.	200 - OK 404 - Not Found 401 - Unauthorized
/networkSegmentationGroups/{groupGuid}/accessPoints/{guid}/units	GET	Returns the list of units that are currently assigned to the specified AP. If the Cloudpath server has not been correctly configured for SmartZone integration, this URI generates a "403 - Forbidden" message. If the Cloudpath server has not been correctly configured for SmartZone integration, this URI generates a "403 - Forbidden" message.	200 - OK 401 - Unauthorized 403 - Forbidden 404 - Not Found

Example of Using GET for Access Points

This example demonstrates how to obtain information about all the APs in a specified network segmentation group.

URI:

This example uses the following URI:

```
https://Jeff245.cloudpath.net/admin/publicApi/networkSegmentationGroups/fe1b1ea8-87c0-467f-9b9f-7827f576cd82/accessPoints
```

where:

- https://Jeff245.cloudpath.net/admin/publicApi is the root URI of the Cloudpath system being used (must include https, as shown).
- fe1b1ea8-87c0-467f-9b9f-7827f576cd82 is the GUID of the network segmentation group

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 133 Request Headers

Key	Value
Content-type	application/json
Authorization	eyJhbGciOiJIUzI1NiIsInR5cGU6IjY2NvdW50QWRtaW5QayI6IjIiLCJhcGILXkiOiJlV2NjTGpZUdZMGMUilCjYXQiOiJlNzU1NzUxNTcsmV4cCl6MTU3NTU3NTQ1N30.2q4KTyDUevkAAz7mJyp529Be1-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 the APs in the network segmentation group. In the following example, the "totalCount": 140 indicates the presence of 140 APs; the response body of the first two is shown below:

```
{
  "page": {
```

```

    "page": 1,
    "pageSize": 10,
    "totalCount": 140
  },
  "contents": [
    {
      "guid": "003535003468",
      "szName": "Sim-100",
      "name": "Sim-100:00:35:35:00:34:68",
      "serialNumber": "020315597858",
      "macAddress": "00:35:35:00:34:68",
      "model": "H550",
      "ethernetPorts": [
        {
          "portName": "LAN4",
          "portIndex": 0,
          "links": []
        },
        {
          "portName": "LAN1",
          "portIndex": 0,
          "links": [
            {
              "rel": "vxlanNetworkIdentifiers",
              "href": "https://jeff245.cloudpath.net/admin/publicApi/networkSegmentationGroups/felblea8-87c0-467f-9b9f-7827f576cd82/vxlanNetworkIdentifiers/2000000",
              "hreflang": null,
              "media": null,
              "title": null,
              "type": null,
              "deprecation": null
            }
          ]
        },
        {
          "portName": "LAN2",
          "portIndex": 0,
          "links": []
        },
        {
          "portName": "LAN3",
          "portIndex": 0,
          "links": []
        }
      ],
      "links": [
        {
          "rel": "self",
          "href": "https://jeff245.cloudpath.net/admin/publicApi/networkSegmentationGroups/felblea8-87c0-467f-9b9f-7827f576cd82/accessPoints/003535003468",
          "hreflang": null,
          "media": null,
          "title": null,
          "type": null,
          "deprecation": null
        },
        {
          "rel": "networkSegmentationGroups",
          "href": "https://jeff245.cloudpath.net/admin/publicApi/networkSegmentationGroups/felblea8-87c0-467f-9b9f-7827f576cd82",
          "hreflang": null,
          "media": null,
          "title": null,
          "type": null,
          "deprecation": null
        },
        {
          "rel": "units",
          "href": "https://jeff245.cloudpath.net/admin/publicApi/networkSegmentationGroups/felblea8-87c0-467f-9b9f-7827f576cd82/accessPoints/003535003468/units",
          "hreflang": null,
          "media": null,

```

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```
        "title": null,
        "type": null,
        "deprecation": null
    }
  ],
  {
    "guid": "0035350034EE",
    "szName": "Sim-101",
    "name": "Sim-101:00:35:35:00:34:EE",
    "serialNumber": "040677579765",
    "macAddress": "00:35:35:00:34:EE",
    "model": "H550",
    "ethernetPorts": [
      {
        "portName": "LAN1",
        "portIndex": 0,
        "links": []
      },
      {
        "portName": "LAN2",
        "portIndex": 0,
        "links": []
      },
      {
        "portName": "LAN3",
        "portIndex": 0,
        "links": []
      },
      {
        "portName": "LAN4",
        "portIndex": 0,
        "links": []
      }
    ],
    "links": [
      {
        "rel": "self",
        "href": "https://jeff245.cloudpath.net/admin/publicApi/networkSegmentationGroups/fe1blea8-87c0-467f-9b9f-7827f576cd82/accessPoints/0035350034EE",
        "hreflang": null,
        "media": null,
        "title": null,
        "type": null,
        "deprecation": null
      },
      {
        "rel": "networkSegmentationGroups",
        "href": "https://jeff245.cloudpath.net/admin/publicApi/networkSegmentationGroups/fe1blea8-87c0-467f-9b9f-7827f576cd82",
        "hreflang": null,
        "media": null,
        "title": null,
        "type": null,
        "deprecation": null
      },
      {
        "rel": "units",
        "href": "https://jeff245.cloudpath.net/admin/publicApi/networkSegmentationGroups/fe1blea8-87c0-467f-9b9f-7827f576cd82/accessPoints/0035350034EE/units",
        "hreflang": null,
        "media": null,
        "title": null,
        "type": null,
        "deprecation": null
      }
    ]
  },
  {
  }
]
```

```
} ]
```

Distribution Switches

You can use REST API calls to obtain information about any distribution switches that are being used in your network segmentation groups.

Distribution switches define the set of vlans that can be assigned to the vni/vlan mapping for network segmentation

The following table lists the properties that can be used in the body of a distribution-switch-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 134 Resource: DistributionSwitch

Property Name	Type	Editable	Sort/Filter	Optional	Description
guid	String	No	sortBy, like	No	The unique identifier for this distribution switch,
szName	String	No*	sortBy, like	No	The name that SmartZone has assigned to this distribution switch.
description	String	Yes	sortBy, like	Yes	A description for this distribution switch.
serialNumber	String	No*	sortBy, like	No	The serial number for this distribution switch.
macAddress	String	No*	sortBy, like	No	The MAC address for this distribution switch. Must be formatted with colon separators, as shown in the following example: 01:23:45:67:89:AB
model	String	No*	sortBy, like	No	The model for this distribution switch
vlanList	List<Vlan>	Yes*	No	No	The list of available Vlans that are on provided for the segmentation group on this distribution switch. Must be between 1-4096. A Vlan gets mapped to a unit if there is an assigned port on one of the mapped core switches.
vniRanges	List <VniRange>	Yes	No	Yes	The list of vni ranges assigned to this switch. A list of Vni ranges must be contain a unique range, and cannot be within the range of any other range assigned to this switch. All ranges must be within the VNI range assigned to the segmentation group that this switch belongs to. See VniRange as defined in: Network Segmentation Groups on page 156
links: self, networkSegmentationGroup, vlans, edgeSwitches	Link	Yes*	No.	No*	Self referencing link. The parent networkSegmentationGroup for this distribution switch. The vlans for this distribution switch The edge switches for this distribution switch

TABLE 135 Resource: VLAN

Property Name	Type	Editable	Sort/Filter	Optional in Request/Response Body?	Description
vlanNumber	Number	No*	sortBy, like	No	Vlan number. Must be between 1-4096 and with no duplicates.
links: vxlanNetworkIdentifier	Link	No	No.	No	If this Vlan has been assigned a vni, the link to that vxlanNetworkIdentifier is provided.

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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 136 Property URIs and Actions

URI	Action	Description	Return Codes
/networkSegmentationGroups/{groupGuid}/distributionSwitches	GET	Returns the list of distribution switches that are in this networkSegmentationGroup. (with paging and sorting and filtering.) If the Cloudpath server has not been correctly configured for SmartZone integration, this URI will generate a 403 message.	200- OK 401 - Unauthorized 403 - Forbidden 404 - Not Found
/networkSegmentationGroups/{groupGuid}/distributionSwitches/{guid}	GET	Returns the specific access point. If the Cloudpath server has not been correctly configured for SmartZone integration, this URI will generate a 403 message.	200- OK 404 - Not Found 401 - Unauthorized
/networkSegmentationGroups/{groupGuid}/distributionSwitches/{guid}/vlans	GET	Returns the list of vlans on the specified distribution switch that are in this networkSegmentationGroup. (with paging and sorting and filtering.) If the Cloudpath server has not been correctly configured for SmartZone integration, this URI will generate a 403 message..	204 - No content 200 - OK 401 - Unauthorized 403 - Forbidden
/networkSegmentationGroups/{groupGuid}/distributionSwitches/{guid}/vlans/{vlanNumber}	GET	Returns the specific vlan on the distribution switch. The "guid" is the vlan number itself. If the Cloudpath server has not been correctly configured for SmartZone integration, this URI will generate a 403.	204 - No content 200 - OK 401 - Unauthorized 403 - Forbidden

Example of Using GET for Distribution Switches

This example demonstrates how to obtain information about the distribution switches in a specified network segmentation group.

URI:

This example uses the following URI:

```
https://nsg192.cloudpath.net/admin/publicApi/networkSegmentationGroups/4c878282-d6ee-4133-98e4-37b1d113caa1/distributionSwitches
```

where:

- https://nsg192.cloudpath.net/admin/publicApi is the root URI of the Cloudpath system being used (must include https, as shown).
- 4c878282-d6ee-4133-98e4-37b1d113caa1 is the GUID of the network segmentation group

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 137 Request Headers

Key	Value
Content-type	application/json
Authorization	eyJhbGciOiJIUzI1NiJ9.eyJzdWIiOiJqZWZmLnJob2RpZUBjb21tc2NvcGUuY29tliwicm9sZVBrIjoieWwMDAilCjhy2NvdW50QWRtaW5Qayl6IjIiLCJhcGILZXXkiOiJaV2NjTGpQZUdZMGUilCjYXQjOjE1NzU1NzUxNTcslmV4cCl6MTU3NTU3NTQ1N30.2q4KTyDUevkAAz7mJyp529Be1-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 the distribution switches in the specified network segmentation group. In the following example, there is only distribution switch - given the description of "NET41XX-CORE-DIS" :

```
{
  "page": {
    "page": 1,
    "pageSize": 1,
    "totalCount": 1
  },
  "contents": [
    {
      "guid": "8C7A153CDCFA",
      "description": "NET41XX-CORE-DIS",
      "szName": "NET41XX-CORE-DIS",
      "serialNumber": "FMQ4234SODW",
      "macAddress": "8C:7A:15:3C:DC:FA",
      "model": "ICX7550-48ZP",
      "links": [
        {
          "rel": "self",
          "href": "https://raynsg.cloudpath.net/admin/publicApi/networkSegmentationGroups/4c878282-d6ee-4133-98e4-37b1d113caa1/distributionSwitches/8C7A153CDCFA",
          "hreflang": null,
          "media": null,
          "title": null,
          "type": null,
          "deprecation": null
        },
        {
          "rel": "networkSegmentationGroups",
          "href": "https://raynsg.cloudpath.net/admin/publicApi/networkSegmentationGroups/4c878282-d6ee-4133-98e4-37b1d113caa1",
          "hreflang": null,
          "media": null,
          "title": null,
          "type": null,
          "deprecation": null
        },
        {
          "rel": "vlans",
          "href": "https://raynsg.cloudpath.net/admin/publicApi/networkSegmentationGroups/4c878282-d6ee-4133-98e4-37b1d113caa1/distributionSwitches/8C7A153CDCFA/vlans?page=1&pageSize=10",
          "hreflang": null,
          "media": null,
          "title": null,
          "type": null,
          "deprecation": null
        },
        {
          "rel": "edgeSwitches",
          "href": "https://raynsg.cloudpath.net/admin/publicApi/networkSegmentationGroups/4c878282-d6ee-4133-98e4-37b1d113caa1/distributionSwitches/8C7A153CDCFA/switches?page=1&pageSize=10",
          "hreflang": null,
          "media": null,
          "title": null,
          "type": null,
          "deprecation": null
        }
      ]
    }
  ]
}
```

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```
}
]
```

Edge Switches

You can use REST API calls to obtain information about any edge switches (also referred to as "access switches") that have been added to a distribution switch in your network segmentation group.

An edge switch contains ports that are assigned an iLan mapping. The ports are shown in the assigned ports resource list.

The following table lists the properties that can be used in the body of an edge-switch-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 138 Resource: EdgeSwitch

Property Name	Type	Editable	Sort/Filter	Optional in Request/Response Body?	Description
guid	String	No	sortBy, like	No	The unique identifier for this edge switch.
szName	String	No*	sortBy, like	No	The name that SmartZone has assigned to this edge switch
description	String	Yes	sortBy, like	Yes	A description for this edge switch.
serialNumber	String	No*	sortBy, like	No	The serial number for this edge switch.
macAddress	String	No*	sortBy, like	No	The MAC address for this edge switch. Must be formatted with colon separators; for example: 01:23:45:67:89:AB
model	String	No*	sortBy, like	No	The model for this edge switch.
ipAddress	String	No*	sortBy, like	No	The IP address for this edge switch.
links: self distributionSwitch assignedPorts	Link	Yes*	No.	No	Self referencing link. The parent distribution switch for this edge switch. The list of assigned ports for this edge switch.

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 139 Property URIs and Actions

URI	Action	Description	Return Codes
/networkSegmentationGroups/{groupGuid}/distributionSwitches/{dsGuid}/switches	GET	Returns the list of edge switches that are part of the distribution switch (with paging and sorting and filtering.) If the Cloudpath server has not been correctly configured for SmartZone integration, this URI will generate a 403 message.	200- OK 401 - Unauthorized 403 - Forbidden 404 - Not Found
/networkSegmentationGroups/{groupGuid}/distributionSwitches/{dsGuid}/switches/{guid}	GET	Returns the specified edge switch. If the Cloudpath server has not been correctly configured for SmartZone integration, this URI will generate a 403 message.	200- OK 404 - Not Found 401 - Unauthorized

Example of Using GET for Edge Switches

This example demonstrates how to obtain information about all the edge switches that are part of a specified distribution switch in a specified network segmentation group.

URI:

This example uses the following URI:

```
https://raynsg.cloudpath.net/admin/publicApi/networkSegmentationGroups/4c878282-d6ee-4133-98e4-37b1d113caa1/distributionSwitches/8C7A153CDCFA/switches
```

where:

- <https://raynsg.cloudpath.net/admin/publicApi> is the root URI of the Cloudpath system being used (must include https, as shown).
- 4c878282-d6ee-4133-98e4-37b1d113caa1 is the GUID of the network segmentation group
- 8C7A153CDCFA is the GUID of the distribution switch

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 140 Request Headers

Key	Value
Content-type	application/json
Authorization	eyJhbGciOiJIUzI1NiJ9.eyJzdWIiOiJqZWZmLnJob2RpZUBjb21tc2NvcGUuY29tliwicm9sZVBrJoiMjEwMDAiLCJhY2NvdW50QWRtaW5Qayl6IjIiLCJhcGILXkiOiJaV2NjTGpQZUdZMGUilCjYXQiOjE1NzU1NzUxNTcsmV4cCl6MTU3NTU3NTQ1N30.2q4KTyDUevkAAz7mJyp529Be1-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 the edge switched that are part of the distribution switch specified.

```
{
  "page": {
    "page": 1,
    "pageSize": 2,
    "totalCount": 2
  },
  "contents": [
    {
      "guid": "C0C520B0C4F5",
      "description": "NET41XX-MDU-2",
      "szName": "NET41XX-MDU-2",
      "serialNumber": "FMF3834Q015",
      "macAddress": "C0:C5:20:B0:C4:F5",
      "model": "ICX7150-C08P",
      "ipAddress": "10.157.35.42",
      "links": [
        {
          "rel": "self",
          "href": "https://raynsg.cloudpath.net/admin/publicApi/networkSegmentationGroups/4c878282-d6ee-4133-98e4-37b1d113caa1/distributionSwitches/8C7A153CDCFA/switches/C0C520B0C4F5",
          "hreflang": null,

```

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```
        "media": null,
        "title": null,
        "type": null,
        "deprecation": null
    },
    {
        "rel": "distributionSwitches",
        "href": "https://raynsg.cloudpath.net/admin/publicApi/networkSegmentationGroups/4c878282-d6ee-4133-98e4-37b1d113caal/distributionSwitches/8C7A153CDCFA",
        "hreflang": null,
        "media": null,
        "title": null,
        "type": null,
        "deprecation": null
    },
    {
        "rel": "assignedPorts",
        "href": "https://raynsg.cloudpath.net/admin/publicApi/networkSegmentationGroups/4c878282-d6ee-4133-98e4-37b1d113caal/distributionSwitches/8C7A153CDCFA/switches/C0C520B0C4F5/assignedPorts?page=1&pageSize=10",
        "hreflang": null,
        "media": null,
        "title": null,
        "type": null,
        "deprecation": null
    }
}
],
{
    "guid": "D4C19E10A100",
    "description": "NET41XX-MDU1",
    "szName": "NET41XX-MDU1",
    "serialNumber": "CYR3342P016",
    "macAddress": "D4:C1:9E:10:A1:00",
    "model": "ICX7450-48P",
    "ipAddress": "10.41.0.2",
    "links": [
        {
            "rel": "self",
            "href": "https://raynsg.cloudpath.net/admin/publicApi/networkSegmentationGroups/4c878282-d6ee-4133-98e4-37b1d113caal/distributionSwitches/8C7A153CDCFA/switches/D4C19E10A100",
            "hreflang": null,
            "media": null,
            "title": null,
            "type": null,
            "deprecation": null
        },
        {
            "rel": "distributionSwitches",
            "href": "https://raynsg.cloudpath.net/admin/publicApi/networkSegmentationGroups/4c878282-d6ee-4133-98e4-37b1d113caal/distributionSwitches/8C7A153CDCFA",
            "hreflang": null,
            "media": null,
            "title": null,
            "type": null,
            "deprecation": null
        },
        {
            "rel": "assignedPorts",
            "href": "https://raynsg.cloudpath.net/admin/publicApi/networkSegmentationGroups/4c878282-d6ee-4133-98e4-37b1d113caal/distributionSwitches/8C7A153CDCFA/switches/D4C19E10A100/assignedPorts?page=1&pageSize=10",
            "hreflang": null,
            "media": null,
            "title": null,
            "type": null,
            "deprecation": null
        }
    ]
}
]
```

Assigned Port

You can use REST API calls to obtain information about ports assigned to edge (also called "access") switches.

The assigned port refers to the specific port assignment that has been applied to the edge switch. This assignment maps to the vni and the switch, and includes the assigned VXLAN. Only assigned ports are managed by the system.

The following table lists the properties that can be used in the body of an assigned-port-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 141 Resource: Assigned Port

Property Name	Type	Editable	Sort/Filter	Optional in Request/Response Body?	Description
nasPort	String	No	sortBy, like	No	The assigned port,
links: self, vxlanNetworkIdentifiers, vlan, switch	Link	Yes*	No.	No	Self-referencing link. The switch for this point, a link to the assigned vxlanNetworkIdentifiers, and the assigned vlan.

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 142 Property URIs and Actions

URI	Action	Description	Return Codes
networkSegmentationGroups/{groupGuid}/distributionSwitches/{dsGuid}/switches/{guid}/assignedPorts	GET	Returns the list of assigned ports on the edge switch. This is <i>not</i> all of the ports, but only those that have been assigned a vni/vxlan mapping. If the Cloudpath server has not been correctly configured for SmartZone integration, this URI will generate a 403 message.	200- OK 401 - Unauthorized 403 - Forbidden 404 - Not Found
/networkSegmentationGroups/{groupGuid}/distributionSwitches/{dsGuid}/switches/{swguid}/assignedPorts?nasPort={nasPortId}	GET	Returns the specific assigned port on the edge switch. If the Cloudpath server has not been correctly configured for SmartZone integration, this URI will generate a 403 message. NOTE The nasPort must be passed as a GET parameter; this differs from other APIs because of the naming of nasPorts.	200- OK 401 - Unauthorized 403 - Forbidden 404 - Not Found

Example of Using GET for Assigned Ports

This example demonstrates how to obtain information about all the assigned ports in a specified edge switch.

URI:

This example uses the following URI:

```
https://raynsg.cloudpath.net/admin/publicApi/networkSegmentationGroups/4c878282-d6ee-4133-98e4-37b1d113caa1/distributionSwitches/8C7A153CDCFA/switches/C0C520B0C4F5/assignedPorts
```

where:

- https://raynsg.cloudpath.net/admin/publicApi is the root URI of the Cloudpath system being used (must include https, as shown).

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- 4c878282-d6ee-4133-98e4-37b1d113caa1 is the GUID of the network segmentation group
- 8C7A153CDCFA is the GUID of the distribution list
- C0C520B0C4F5 is the GUID of one of the edge switches

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 143 Request Headers

Key	Value
Content-type	application/json
Authorization	eyJhbGciOiJIUzI1NiJ9.eyJzdWwiOiJqZWZmLnJob2RpZUBjb21tc2NvcGUuY29tIiwicm9sZVBrIjoieWMDAilCjY2NvdW50QWRtaW5QayI6IjliILCjhcGILZkxiOiJaV2NjTGpQZUdZMGUilCjYXQiOjE1NzU1NzUxNTcsmV4cCl6MTU3NTU3NTQ1N30.2q4KTyDUevkAAz7mJyp529Be1-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 the assigned ports of the specified edge switch:

```
{
  "page": {
    "page": 1,
    "pageSize": 2,
    "totalCount": 2
  },
  "contents": [
    {
      "nasPort": "1/1/10",
      "links": [
        {
          "rel": "self",
          "href": "https://nsg192.cloudpath.net/admin/publicApi/networkSegmentationGroups/4c878282-d6ee-4133-98e4-37b1d113caa1/distributionSwitches/8C7A153CDCFA/switches/C0C520B0C4F5/assignedPorts?nasPort=1/1/10",
          "hreflang": null,
          "media": null,
          "title": null,
          "type": null,
          "deprecation": null
        },
        {
          "rel": "edgeSwitches",
          "href": "https://nsg192.cloudpath.net/admin/publicApi/networkSegmentationGroups/4c878282-d6ee-4133-98e4-37b1d113caa1/distributionSwitches/8C7A153CDCFA/switches/C0C520B0C4F5",
          "hreflang": null,
          "media": null,
          "title": null,
          "type": null,
          "deprecation": null
        }
      ],
      "rel": "vlans",
      "href": "https://nsg192.cloudpath.net/admin/publicApi/networkSegmentationGroups/4c878282-d6ee-4133-98e4-37b1d113caa1/distributionSwitches/8C7A153CDCFA/vlans/301",
    }
  ]
}
```

```

        "hreflang": null,
        "media": null,
        "title": null,
        "type": null,
        "deprecation": null
    }
  ],
  {
    "nasPort": "1/1/9",
    "links": [
      {
        "rel": "self",
        "href": "https://nsg192.cloudpath.net/admin/publicApi/networkSegmentationGroups/4c878282-d6ee-4133-98e4-37b1d113caal/distributionSwitches/8C7A153CDCFA/switches/C0C520B0C4F5/assignedPorts?nasPort=1/1/9",
        "hreflang": null,
        "media": null,
        "title": null,
        "type": null,
        "deprecation": null
      },
      {
        "rel": "edgeSwitches",
        "href": "https://nsg192.cloudpath.net/admin/publicApi/networkSegmentationGroups/4c878282-d6ee-4133-98e4-37b1d113caal/distributionSwitches/8C7A153CDCFA/switches/C0C520B0C4F5",
        "hreflang": null,
        "media": null,
        "title": null,
        "type": null,
        "deprecation": null
      },
      {
        "rel": "vlans",
        "href": "https://nsg192.cloudpath.net/admin/publicApi/networkSegmentationGroups/4c878282-d6ee-4133-98e4-37b1d113caal/distributionSwitches/8C7A153CDCFA/vlans/300",
        "hreflang": null,
        "media": null,
        "title": null,
        "type": null,
        "deprecation": null
      }
    ]
  }
]
}

```

VXLAN Network Identifiers (VNIs)

You can use REST API calls to obtain information about existing VNIs being used in a specified network segmentation group.

The following table lists the properties that can be used in the body of a VxlanNetworkIdentifier-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 144 Resource: VxlanNetworkIdentifier

Property Name	Type	Editable	Sort/Filter	Optional in Request/Response Body?	Description
vni	Long	Yes	orderBy, like	No	The unique identifier for the VNI. It must be unique within the network segmentation group.

TABLE 144 Resource: VxlanNetworkIdentifier (continued)

Property Name	Type	Editable	Sort/Filter	Optional in Request/Response Body?	Description
links: self, units, accessPoints, assignedPort	Link	Yes*	No.	No	<p>Self-referencing link. If the VNI has been assigned to a unit and to an AP, the links to that unit and AP are provided. (The VNI must be added to the unit and access point from those resources.)</p> <p>The assigned port is mapped if the unit has been mapped to a physical port on an edge switch. The "rel": "assignedPort" response enables the API user to follow this vxlanNetworkIdentifier to the assigned port, and then to the edge switch. Refer also to Assigned Port on page 171.</p>

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 145 Property URIs and Actions

URI	Action	Description	Return Codes
/networkSegmentationGroups/{guid}/vxlanNetworkIdentifiers	GET	Returns the list of VNIs that are currently assigned to the network segmentation group specified.	401 - Unauthorized 200 - OK
/networkSegmentationGroups/{guid}/vxlanNetworkIdentifiers/{vni}	GET	Returns information about the specified VNI.	200- OK 404 - Not Found 401 - Unauthorized

Example of Using GET for VNIs

This example demonstrates how to obtain information about all VNIs that have already been assigned to a specified network segmentation group.

URI:

This example uses the following URI:

```
https://nsg192.cloudpath.net/admin/publicApi/networkSegmentationGroups/4c878282-d6ee-4133-98e4-37b1d113caa1/vxlanNetworkIdentifiers
```

where:

- https://nsg192.cloudpath.net/admin/publicApi is the root URI of the Cloudpath system being used (must include https, as shown).
- 4c878282-d6ee-4133-98e4-37b1d113caa1 is the GUID of the network segmentation group.

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 146 Request Headers

Key	Value
Content-type	application/json

TABLE 146 Request Headers (continued)

Key	Value
Authorization	eyJhbGciOiJIUzI1NiJ9.eyJzdWIiOiJqZWZmLnJob2RpZUBjb21tc2NvcGUuY29tIiwicm9sZVBrIjoieWMDAilCJhY2NvdW50QWRtaW5QayI6IjliLzIiLCJhcGILZXRkOiJhV2NjTGpQZUdZMGUilCjYXQjOjE1NzU1NzUxNTcslmV4cCI6MTU3NTU3NTQ1N30u2q4KTyDUevkAAz7mJyp529Be1-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 indicates with the "totalCount": 1001 that there 1001 assigned VNIs in the specified network segmentation group. Partial output is shown below:

```
{
  "page": {
    "page": 1,
    "pageSize": 10,
    "totalCount": 1001
  },
  "contents": [
    {
      "vni": 1000,
      "links": [
        {
          "rel": "self",
          "href": "https://nsg192.cloudpath.net/admin/publicApi/networkSegmentationGroups/4c878282-d6ee-4133-98e4-37b1d113caa1/vxlanNetworkIdentifiers/1000",
          "hreflang": null,
          "media": null,
          "title": null,
          "type": null,
          "deprecation": null
        },
        {
          "rel": "networkSegmentationGroups",
          "href": "https://nsg192.cloudpath.net/admin/publicApi/networkSegmentationGroups/4c878282-d6ee-4133-98e4-37b1d113caa1",
          "hreflang": null,
          "media": null,
          "title": null,
          "type": null,
          "deprecation": null
        },
        {
          "rel": "units",
          "href": "https://nsg192.cloudpath.net/admin/publicApi/properties/Property-acbdfa3a-2800-44dd-a943-7d4c58501168/units/Unit-b7ed85d5-cb94-4a76-bc79-e45a3a3b272d",
          "hreflang": null,
          "media": null,
          "title": null,
          "type": null,
          "deprecation": null
        }
      ]
    },
    {
      "vni": 1001,
      "links": [
        {
          "rel": "self",
          "href": "https://nsg192.cloudpath.net/admin/publicApi/networkSegmentationGroups/4c878282-d6ee-4133-98e4-37b1d113caa1/vxlanNetworkIdentifiers/1001",
          "hreflang": null,
          "media": null,
          "title": null,
          "type": null,
          "deprecation": null
        }
      ]
    }
  ]
}
```

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```
        "hreflang": null,
        "media": null,
        "title": null,
        "type": null,
        "deprecation": null
    },
    {
        "rel": "networkSegmentationGroups",
        "href": "https://nsg192.cloudpath.net/admin/publicApi/networkSegmentationGroups/
4c878282-d6ee-4133-98e4-37b1d113caal",
        "hreflang": null,
        "media": null,
        "title": null,
        "type": null,
        "deprecation": null
    },
    {
        "rel": "units",
        "href": "https://nsg192.cloudpath.net/admin/publicApi/properties/Property-
acbdfa3a-2800-44dd-a943-7d4c58501168/units/Unit-87fb41d0-5dcb-4e49-99ba-6b72ca108fd5",
        "hreflang": null,
        "media": null,
        "title": null,
        "type": null,
        "deprecation": null
    }
]
},
{
    "vni": 1002,
    "links": [
        {
            "rel": "self",
            "href": "https://nsg192.cloudpath.net/admin/publicApi/networkSegmentationGroups/
4c878282-d6ee-4133-98e4-37b1d113caal/vxlanNetworkIdentifiers/1002",
            "hreflang": null,
            "media": null,
            "title": null,
            "type": null,
            "deprecation": null
        },
        {
            "rel": "networkSegmentationGroups",
            "href": "https://nsg192.cloudpath.net/admin/publicApi/networkSegmentationGroups/
4c878282-d6ee-4133-98e4-37b1d113caal",
            "hreflang": null,
            "media": null,
            "title": null,
            "type": null,
            "deprecation": null
        },
        {
            "rel": "units",
            "href": "https://nsg192.cloudpath.net/admin/publicApi/properties/Property-90478c87-
c1e3-4289-a464-6231f8b0f362/units/Unit-9c76a6e4-49e9-4611-967b-9750c2359935",
            "hreflang": null,
            "media": null,
            "title": null,
            "type": null,
            "deprecation": null
        },
        {
            "rel": "assignedPort",
            "href": "https://nsg192.cloudpath.net/admin/publicApi/networkSegmentationGroups/
4c878282-d6ee-4133-98e4-37b1d113caal/distributionSwitches/8C7A153CDCFA/switches/C0C520B0C4F5/assignedPorts?
nasPort=1/1/9",
            "hreflang": null,
            "media": null,
            "title": null,
            "type": null,
            "deprecation": null
        }
    ]
}
```


System

You can use REST API calls to obtain information about the integrated SmartZone system being used in your network segmentation groups.

The following table lists the properties that can be used in the body of a system-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 147 Resource: System

Property Name	Type	Editable	Sort/Filter	Optional in Request/Response Body?	Description
groupStatus	String<ENUM>	Yes	none	No	The current combined status of the network segmentation groups. If changed to "OUT_OF_SYNC" this will update all groups that are not currently Synchronizing to that state. Current status can be ACTIVE, OUT_OF_SYNC, CONNECTION_ERROR, SYNCHRONIZING. Changes of state to "OUT_OF_SYNC" can only be applied to ACTIVE or , CONNECTION_ERROR status.
groupCount	int	No	none	No	The count of network segmentation groups in the system
currentSzVersion	String	No	none	No	The current version of SmartZone that is currently integrated
szHighestVersion	String	No	none	No	The highest version of SmartZone that can be supported with this release
links: self,	Link	No	none	No	Self-referencing link.

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 148 Property URIs and Actions

URI	Action	Description	Return Codes
networkSegmentationGroups/system	GET	Returns the network segmentation group system resource.	200- OK 401 - Unauthorized 403 - Forbidden
/networkSegmentationGroups/system	PUT	Allows the user to request a change to the status of the network segmentation group system resource. See resource definition for permitted changes.	200- OK 401 - Unauthorized 403 - Forbidden

Example of Using GET for Access Points

This example demonstrates how to obtain status of the integrated system.

URI:

This example uses the following URI:

```
https://nsg192.cloudpath.net/admin/publicApi/networkSegmentationGroups/system
```

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where:

- <https://nsg192.cloudpath.net/admin/publicApi> is the root URI of the Cloudpath system being used (must include https, as shown).

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 149 Request Headers

Key	Value
Content-type	application/json
Authorization	eyJhbGciOiJIUzI1NiJ9.eyJzdWIiOiJqZWZmLnJob2RpZUBjb21tc2NvcGUuY29tliwicm9sZVBrLjoiMjEwMDAiLCJhY2NvdW50QWRtaW5Qayl6IjliLCJhcGILZXkiOiJaV2NjTGpQZUdZMGUilCJpYXQiOiE1NzU1NzUxNTcslmV4cCI6MTU3NTU3NTQ1N30u2q4KTyDUevkAAz7mJyp529Be1-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 network segmentation group system resource, as shown in the example below:

```
{
  "groupStatus": "ACTIVE",
  "groupCount": 1,
  "currentSzVersion": "6.1.1",
  "szHighestVersion": "6.1.1",
  "links": [
    {
      "rel": "self",
      "href": "https://nsg192.cloudpath.net/admin/publicApi/networkSegmentationGroups/system",
      "hreflang": null,
      "media": null,
      "title": null,
      "type": null,
      "deprecation": null
    }
  ]
}
```

Health

You can use REST API calls to perform a status change about the health of your network segmentation groups.

The following table lists the properties that can be used in the body of a health-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 150 Resource: Health

Property Name	Type	Editable	Sort/Filter	Optional in Request/Response Body?	Description
groupCount	number	no	None	No	The number of network segmentation groups

TABLE 150 Resource: Health (continued)

Property Name	Type	Editable	Sort/Filter	Optional in Request/Response Body?	Description
consolidatedStatus	String <Enum>	Yes	None	No	The current status of the groups as a whole: ACTIVE, OUT_OF_SYNC, CONNECTION_ERROR, SYNCHRONIZING, SYNCHRONIZED If the "status" is "OUT_OF_SYNC", or "ACTIVE", a state change to "SYNCHRONIZED" is allowed on the PUT. This will trigger the synchronize state change on all groups that are not "connection_error" or "synchronizing" status.

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 151 Property URIs and Actions

URI	Action	Description	Return Codes
/networkSegmentationGroups/health	PUT	Allows a state change on the overall health of the groups to "synchronized". See "consolidated status" above for the behavior.	200- OK 401 - Unauthorized

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 That are Not Part of a Network Segmentation Group](#) on page 94. 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 That are Not Part of a Network Segmentation Group](#) on page 94 is:

```
"apiHashSecret": "CPNENCv2:BC|E30EECAF-AEFE-41F5-BBF9-5D3D450155AB|1JCWKjdHjnjH6iwwHS/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/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/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)
 - [Property-afaccdf8-5e39-41ce-9098-9747cc38aaa0](#) is the GUID of the property that contains the units in question.
- b. Use a POST call.
 - c. In the Request Body, enter your *apiHashSecret*. An example of the format is:

```
{  
  "hashedSecret": "CPNENCv2:BC|E30EECAF-AEFE-41F5-BBF9-5D3D450155AB|1JCWKjdHjnjH6iwwHS/  
"
```


TABLE 153 Resource: Properties (continued)

Property Name	Type	Editable	Sort/Filter	Optional in Request/Response Body?	Description
address	String	Yes	orderBy, like	Yes	The address for this property.
description	String	Yes	orderBy, like	Yes	A description for this property.
enforceMaxUnits	Boolean	Yes	orderBy, like	Yes<false>	Indicates if a value configured for "max units" will be enforced when adding a unit to the property.
maxUnits	int	Yes	orderBy, like	No<0>	The maximum number of units permitted for this property.
allowSeparateGuestSecret	Boolean	Yes	orderBy, 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	orderBy, like	Yes	Name that will be assigned in all email and SMS communications.
managementPhone	String	Yes	orderBy, like	Yes	Phone that will be assigned in all email and SMS communications.
managementEmail	String	Yes	orderBy, 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*	orderBy	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 154 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

Tenant Portal APIs

Tenant Portal Properties

TABLE 155 Resource: Access Resource

Property Name	Type	Editable	Sort/Filter	Optional in Request/Response Body?	Description
loginText	String	No	Neither	Yes	The login text string to use for this property. If not provided, the default text is used.
portalAllowed	boolean	Yes	Neither	No, default is true	Indicates if this property supports the Cloudpath tenant portal.

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 156 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/access	GET	An unauthenticated endpoint that returns the access resource detailed above. This indicates if the property has enabled the tenant portal and the login text to present to the tenant.	404 - Not found 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
/properties/{guid}/uiConfiguration/favicon	GET	<p>An unauthenticated endpoint that returns an image to be used for the tenant portal favicon.</p> <p>The default favicon is returned if one of the following is true:</p> <ul style="list-style-type: none"> • The user could not be authenticated. • No custom favicon is set. • No property matches the provided property GUID. <p>The custom favicon for the property is returned if the user is authorized and a custom favicon has been set.</p> <p>A "401 - Unauthorized" message is returned instead of a favicon if the property exists but the tenant API is disabled.</p>	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/properties/Property-afaccdf8-5e39-41ce-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)
- Property-afaccdf8-5e39-41ce-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 157 Request Headers

Key	Value
Content-type	application/json
Authorization	eyJhbGciOiJIUzI1NiJ9.eyJzdWIiOiJCbGFydG1lbnQgMSlmlmFjY2Vzc1Rva2VuljoiWkFZZGxMM0ciLCJwcm9wZXJ0eUd1aWQiOiJQcm9wZXJ0eS1hZmFjY2RmOC01ZTM5LTQxY2UtOTA5OC05NzQ3Y2MzOGFhYTAlLCJ1bml0R3VpZCI6IlVuaXQtZjU5ZjJjOTMtNjc4Ni00ZDhlLWFKYWQzMmUONGQzM2RmMzk5liwiYXBpS2V5IjoieVJDakpPYldSNkVSlwiiaWF0IjoxNjE0MTMwNjg2LCJleHAiOiJlE2MTQxMzA5ODZ9.ZO1NsBYwKDLCCHgQPKZI493oHoJakQtqzp5KgMEx0-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/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/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 158 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 Table 64 on page 92. 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"> • Self-referencing link • Property link • Tenant portal link • Links to associated devices

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 159 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 Tenant Portal API Requirements on page 181.	401 - Unauthorized 200 - OK
/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/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)
- 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 160 Request Headers

Key	Value
Content-type	application/json
Authorization	eyJhbGciOiJIUzI1NiJ9.eyJzdWUiOiJCbGFydG1lbnQgMSIsImFjY2VzIjoiRva2VuljoiWkFZZGxMM0ciLCJwcm9wZXJ0eUd1aWQiOiJQcm9wZXJ0eS1hZmFjY2RmOC01ZTM5LTQxY2UtOTA5OC05NzQ3Y2MzOGFhYTILCj1bml0R3VpZCI6IlVuaXQtZjU5ZjJjOTMtNjc4Ni00ZDhlLWFKYVWQtMmUONGQzM2RmMzk5IiwiaXYXBpS2V5IjoieVJDakpPYldSNkVSlwiiaWF0IjoxNjE0MTQ5MTg5LjE0eH0iOjE2MTQxNDk0ODI9.nirUAxLkinvXRZzIT SjbvPq4vSdB1OiiSPoVDsnVwho

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": "",
  "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/publicApi/system/smsCountryCodes/12310",
        "hreflang": null,
        "media": null,
        "title": null,
        "type": null,
        "deprecation": null
      }
    ]
  },
  "links": [
    {
      "rel": "property",
      "href": "https://jeff245.cloudpath.net/admin/rest/tenant/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/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/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%7CdhZ1zfqLYWsUKP9hNBIGeA%3D%3D%3ADRG5Dkq1W%2BnpEjT0Hjfosw%3D%3D&property=Property-afaccdf8-5e39-41ce-9098-9747cc38aaa0",
      "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 161 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 162 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:


```
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  
  }  
]  
}
```


Property Management APIs

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Property Management API Requirements

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

Obtaining Authorization Token Required for All Property Management APIs

The first property management API that you must run is to authenticate that you are a registered user for a specified management portal. If successfully authenticated, the response body provides a Json Web Token (JWT) to use in the Authorization header of all property management APIs for this specific management portal. (You will not be using the token generated from the core Cloudpath APIs.)

Follow the steps below to generate the required token:

1. Set up the the property management API to log in to the management portal:
 - a. Create the URI by using the format:

```
https://<Your_Cloudpath_System>/admin/rest/propertyMgmtPortals/<Management-Portal-GUID>/token
```

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

```
https://Jeff245.cloudpath.net/admin/rest/propertyMgmtPortals/  
MduPortalAccess-79293a33-262c-415b-8f0c-98ebc01eb503/token
```

Where:

- https://Jeff245.cloudpath.net/admin/rest/propertyMgmtPortals is the root URI of the Cloudpath system being used (must include https, as shown)
- MduPortalAccess-79293a33-262c-415b-8f0c-98ebc01eb503 is the GUID of the management portal to be authenticated against. The token is valid for actions on this specific portal only.

- b. Use a POST call.
- c. In the Request Body, enter the user's email and the secret of the management portal, as in the following example:

```
{  
  "userName": "js@ltapts.com",  
  "password": "secret"  
}
```

2. For Request headers, you need:

NOTE

The Authorization in the Request header for this POST must be a token that was generated from the core APIs, as described in [Security](#) on page 14.

TABLE 164 Request Header

Key	Value
Content-type	application/json
Authorization	eyJhbGciOiJIUzUxMiJ9.eyJhY2NvdW50UGsiOiJlIiwicm9sZVBrIjoiaWMDAiLCJhdWQiOiJSRVNlYyODkxNjg3NSwiZXhwIjojNjI0OTAzMTc1fQ.-JMu3ybf6r547AJozgcs3eUiEoleTvuRmi2y24f8Qrvs4q_Ej1PXOz3ZowmvWVs4AS5gswPrptvHsZLhU9ZHGG

3. Send the request.

Once the request is sent, you will receive a "Status: 200 OK" if the POST is successful. The response body provides a token. You will need to generate a new token each time the current ones expires. You need to use the active token from this response in the Authorization header on all property management APIs.

```
{
  "userName": "js@ltapts.com",
  "token":
  "eyJhbGciOiJIUzUxNiJ9.eyJzZdWIiOiJmYXN0Iiwicm9sZVBrIjoiaWMDAiLCJhdWQiOiJSRVNlYyODkxNjg3NSwiZXhwIjojNjI0OTAzMTc1fQ.-JMu3ybf6r547AJozgcs3eUiEoleTvuRmi2y24f8Qrvs4q_Ej1PXOz3ZowmvWVs4AS5gswPrptvHsZLhU9ZHGG"
}
```

When grabbing the token, do not take the quotation marks. In the example above, you would grab the token as follows for using it in the Request Authorization header on a property management API:

```
eyJhbGciOiJIUzUxNiJ9.eyJzZdWIiOiJmYXN0Iiwicm9sZVBrIjoiaWMDAiLCJhdWQiOiJSRVNlYyODkxNjg3NSwiZXhwIjojNjI0OTAzMTc1fQ.-JMu3ybf6r547AJozgcs3eUiEoleTvuRmi2y24f8Qrvs4q_Ej1PXOz3ZowmvWVs4AS5gswPrptvHsZLhU9ZHGG
```

Root API

The root for all property management APIs is as follows:

```
<Cloudpath FQDN>/admin/rest/propertyMgmtPortals/{guid}
```

where {guid} is replaced by the unique identifier of a configured management portal.

Portal (Property Management)

You can use REST API calls to obtain information about management portals, to create or edit management portals, and to delete management portals.

The following table lists the properties that can be used in the body of a property management-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 165 Resource: Management Portal

Property Name	Type	Editable	Sort/Filter	Optional in Request/Response Body?	Description
guid	String	Yes	orderBy, like	Optional on create only, but not on any subsequent uses	The unique identifier for this management portal.
name	String	Yes	orderBy, like	No	The display name for this management portal; must be unique.
description	String	Yes	orderBy, like	Yes	A description for this management portal.
accessSecret	String	Yes	orderBy, like	No	Not provided from this URI..
links self, properties, users, controlConfiguration, uiConfiguration	Link	No	No	Yes	This includes the following href links that can be used in other API calls: <ul style="list-style-type: none"> • self-referencing link • link to the controlConfiguration resource • link to the uiConfiguration resource • link to the list of properties associated with this management portal. • link to the list of users associated with this management portal.

TABLE 166 Resource: ControlConfiguration

Property Name	Type	Editable	Sort/Filter	Optional in Request/Response Body?	Description
createUnit	Boolean	No	Yes	No	Indicates if the user is allowed to create a unit on this property.
deleteUnit	boolean	No	Yes	No	Indicates if the user is allowed to delete a unit on this property
basicUnitProperties	boolean	No	Yes	No	Indicates if the user is allowed to alter the basic unit properties. This includes the names and descriptions of units as well as all the contact information for units.
changeUnitSecrets	boolean	No	Yes	No	Indicates if the user is allowed to reset the wi-fi secret and guest wi-fi secret on units.
resetUnitAuthToken	boolean	No	Yes	No	Indicates if the user is allowed to set the unit state to "TOKEN_RESET", thereby resetting the tenant portal authentication token on units.
alterUnitState	boolean	No	Yes	No	Indicates if the user is allowed to change the basic state of units between ACTIVE/SUSPENDED.
setHelpText	boolean	No	Yes	No	Indicates if the user is allowed to set the help text for the tenant portal displayed for this property.
setAnnouncements	boolean	No	Yes	No	Indicates if the user is allowed to set the announcements for the tenant portal displayed for this property.
links	Link	No	No	Yes	Self referencing link and link to the parent management portal.

TABLE 167 Resource: UiConfiguration

Property Name	Type	Editable	Sort/Filter	Optional in Request/Response Body?	Description
title	String	Yes	No	Yes	The title to use in the management portal UI.
subtitle	String	Yes	No	Yes	The subtitle to use in the management portal UI.
loginText	String	Yes	No	Yes	Text to display when logging in to the management portal 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.
iconFileName	String	NO	No	Yes	The name of the icon file, if one has been uploaded. This will be updated when the icon file is changed via the icon file link.
links					logoFile, favicon, self, and parent (management portal)

Management Portal 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 168 Management Portal URIs and Actions

URI	Action	Description	Return Codes
/propertyMgmtPortals/{guid}/token	POST	Authenticates the user and returns a valid security token. The body must include the userName and password, as shown in the following format: <pre>{ "userName": "user@company.com", "password": "portalAccessSecret" }</pre>	401 - Unauthorized 201 - Created
/propertyMgmtPortals/{guid}	GET	Returns information about the specified management portal.	404 - Not Found 401 - Unauthorized 200 - OK
/propertyMgmtPortals/{guid}/controlConfiguration	GET	Returns the control configuration information for the specified management portal. The control configuration specifies which APIs are accessible to users of this portal.	404 - Not Found 401 - Unauthorized 200 - OK

TABLE 168 Management Portal URIs and Actions (continued)

URI	Action	Description	Return Codes
/propertyMgmtPortals/{guid}/uiConfiguration	GET	Returns the UI configuration information for the specified management portal.	404 - Not Found 401 - Unauthorized 200 - OK
/propertyMgmtPortals/{guid}/uiConfiguration/styles	GET	An unauthenticated endpoint that returns a css detailing the style settings for the management portal. mediaType= "text/css"	200- OK 404 - Not Found
/propertyMgmtPortals/{guid}/uiConfiguration/access	GET	An unauthenticated endpoint that returns access resource data that can be displayed without authentication. The resource returned contains the login text desired for this portal.	200- OK 404 - Not Found
/propertyMgmtPortals/{guid}/uiConfiguration/logoFile	GET	Returns the logo file as an image file to be used for the management portal. The response includes the file type.	404 - Not Found 401 - Unauthorized 200 - OK
/propertyMgmtPortals/{guid}/uiConfiguration/favicon	GET	An unauthenticated endpoint returns an image to be used for the management portal favicon. If no favicon is configured or the user is not authenticated, or if API access is disabled, the default favicon will be returned.	401 - Unauthorized 200 - OK

Example of Using GET for a Property Management API

This example demonstrates how to obtain a listing of a management portal that has already been created in the Cloudpath UI.

URI:

This example uses the following URI:

```
https://Jeff245.cloudpath.net/admin/rest/propertyMgmtPortals/  
MduPortalAccess-79293a33-262c-415b-8f0c-98ebc01eb503
```

where:

- https://Jeff245.cloudpath.net/admin/rest/propertyMgmtPortals is the root URI of the Cloudpath system being used (must include https, as shown).
- MduPortalAccess-79293a33-262c-415b-8f0c-98ebc01eb503 is the GUID of the management portal.

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 169 Request Headers

Key	Value
Content-type	application/json


```
}
  ]
}
```

Properties (Property Management)

You can use REST API calls to obtain information about the properties you have been authenticated to manage as well as to update details about these properties.

The following table lists the properties that can be used in the body of a property management-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 170 Resource: Properties

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 property.
name	String	No	orderBy, like	No	The display name for this property, must be unique
address	String	No	orderBy, like	Yes	The address for this property.
description	String	No	orderBy, like	Yes	A description for this property.
enforceMaxUnits	Boolean	No	orderBy, like	Yes<false>	Indicates if a value configured for "max units" will be enforced when adding a unit to the property.
maxUnits	int	No	orderBy, like	No<0>	The maximum number of units permitted for this property.
allowSeparateGuestSecret	Boolean	No	orderBy, 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	No	orderBy, like	Yes	Name that will be assigned in all email and SMS communications.
managementPhone	String	No	orderBy, like	Yes	Phone that will be assigned in all email and SMS communications.
managementEmail	String	No	orderBy, like	Yes	Email that will be assigned in all email and SMS communications
tenantPortalHelpText	String	Yes if permitted by access controls	Neither	Yes	Help text that will be provided to users of the tenant portal.
tenantPortalAnnouncements	String	Yes if permitted by access controls	Neither	Yes	Announcements that will be provided to users of the tenant portal.
sendEmail	Boolean	Yes	Neither	Yes<true>	Indicates that email will be sent to tenants when there are changes on a unit.

Property Management APIs
Properties (Property Management)

TABLE 170 Resource: Properties (continued)

Property Name	Type	Editable	Sort/Filter	Optional in Request/Response Body?	Description
sendSms	Boolean	Yes	Neither	Yes<true>	Indicates that SMS will be sent to tenants when there are changes on a unit.
smsPassphraseChange	String	Yes	Neither	Yes	If enabled, this is the SMS text that gets sent to the unit owner when the passphrase or guest passphrase is changed. Users are responsible for creating text correctly if they are using the guest passphrase or the tenant portal. The following variables are used to substitute the passphrases and the portal URL in all cases: \${PROPERTY_NAME} , \${UNIT_PASSPHRASE}, \${GUEST_PASSPHRASE}, \${UNIT_PORTAL_URL}, \${UNIT_MANAGER}, \${UNIT_CONTACT_NAME}
emailPassphraseSubject	String	Yes	Neither	Yes	If set, this is the subject for the email that gets sent to the unit owner when either the passphrase or guest passphrase for a unit is changed.
emailPassphraseChange	String	Yes	Neither	Yes	If set, this is the email text that will be sent to the unit owner when the passphrase or guest passphrase is changed. Users are responsible for creating text correctly if they are using the guest passphrase or the tenant portal. The following variables are used to substitute the passphrases and the portal URL in all cases: \${PROPERTY_NAME} , \${UNIT_PASSPHRASE}, \${GUEST_PASSPHRASE}, \${UNIT_PORTAL_URL}, \${UNIT_MANAGER}, \${UNIT_CONTACT_NAME}
smsAssignedUnit	String	Yes	Neither	Yes	If set, this is the SMS text that gets sent to the unit owner when a unit is created. Users are responsible for creating text correctly if they are using the guest passphrase or the tenant portal. The following variables are used to substitute the passphrases and the portal URL in all cases: \${PROPERTY_NAME} , \${UNIT_PASSPHRASE}, \${GUEST_PASSPHRASE}, \${UNIT_PORTAL_URL}, \${UNIT_MANAGER}, \${UNIT_CONTACT_NAME}
emailAssignedUnitSubject	String	Yes	Neither	Yes	If set, this is the subject for the email that gets sent to the unit owner when they are assigned a unit.
emailAssignedUnit	String	Yes	Neither	Yes	If set, this is the email text that will be sent to the unit owner when a unit is created. Users are responsible for creating text correctly if they are using the guest passphrase or the tenant portal. The following variables are used to substitute the passphrases and the portal URL in all cases: \${PROPERTY_NAME} , \${UNIT_PASSPHRASE}, \${GUEST_PASSPHRASE}, \${UNIT_PORTAL_URL}, \${UNIT_MANAGER}, \${UNIT_CONTACT_NAME}
usingNetworkSegmentation	Boolean	No	No	Yes	True if the property is configured to use network segmentation; false otherwise.
links	Link	No	No	Yes	Self referencing link, a link to the management portal and link to the list of units associated with this property.

TABLE 171 Resource: UiConfiguration

Property Name	Type	Editable	Sort/Filter	Optional in Request/Response Body?	Description
tenantTitle	String	No	No	Yes	The title to use in the management portal UI.
tenantSubtitle	String	No	No	Yes	The subtitle to use in the management portal UI.
apiAllowed	Boolean	Yes	No	Yes<true>	Indicates if access is permitted to the tenant API.
portalAllowed	Boolean	Yes	No	Yes<true>	Indicates if access is permitted to the tenant portal. The "apiAllowed" property must be enabled for this to be true.
tenantSetDpsk	Boolean				Indicates if the tenant can manually set the wifi passphrase on the tenant portal to a specific desired value.
emailTextResetAuth	String	Yes	No	Yes	If set, this is the email text that gets sent to the unit owner when the tenant portal authentication token is reset. The user is responsible for creating text correctly and can use the following variables to substitute the passphrases and the tenant portal URL in all cases: <code>\${PROPERTY_NAME} , \${UNIT_PASSPHRASE}, \${GUEST_PASSPHRASE}, \${UNIT_PORTAL_URL}, \${UNIT_MANAGER}, \${UNIT_CONTACT_NAME}</code>
emailSubjectResetAuth	String	Yes	No	Yes	If set, this is the email subject that gets sent to the unit owner when the tenant portal authentication token is reset.
smsTextResetAuth	String	Yes	No	Yes	If set, this is the SMS message that gets sent to the unit owner when the tenant portal authentication token is reset. The user is responsible for creating text correctly and can use the following variables to substitute the passphrases and the tenant portal URL in all cases: <code>\${PROPERTY_NAME} , \${UNIT_PASSPHRASE}, \${GUEST_PASSPHRASE}, \${UNIT_PORTAL_URL}, \${UNIT_MANAGER}, \${UNIT_CONTACT_NAME}</code>
loginText	String	No	No	Yes	Text to display when logging in to the management portal UI.
mainColor	String	No	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	No	No	Yes	The accent color is used for sub-headers and borders.
separatorColor	String	No	No	Yes	The separator color is used for lines in between rows of data.
textColor	String	No	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. The logo is placed on top of a background the same color as the color of the mainColor property.
iconFileName	String	No	No	Yes	The name of the icon file, if one has been uploaded. This will be updated when the icon file is changed via the icon file link.
links	Link	No	No	Yes	logoFile, favicon, self, and parent (management portal)

TABLE 172 Management Portal URIs and Actions

URI	Action	Description	Return Codes
/propertyMgmtPortals/{portalGuid}/properties	GET	Returns the list of Properties that this authenticated user can manage.	401 - Unauthorized 200 - OK
/propertyMgmtPortals/{portalGuid}/properties/{propertyGuid}	PUT	Updates details about the specified property. The changes are permitted only on tenantPortalHelpText and tenantPortalAnnouncements, and only if the access control configuration for this management portal allows these to be set. If the change requested is NOT permitted by access controls, a "403 - Forbidden" code is returned.	403 - Forbidden 404 - Not Found 401 - Unauthorized 200 - OK
	GET	Returns information about the specified property.	404 - Not Found 401 - Unauthorized 200 - OK
/propertyMgmtPortals/{portalGuid}/properties/{guid}/uiConfiguration	GET	Returns the UI configuration information for the specified property.	404 - Not Found 401 - Unauthorized 200 - OK
/propertyMgmtPortals/{portalGuid}/properties/{guid}/uiConfiguration/logoFile	GET	Returns the logo file as an image file. The response includes the file type.	404 - Not Found 401 - Unauthorized 200 - OK
/propertyMgmtPortals/{portalGuid}/properties/{guid}/uiConfiguration/favicon	GET	The custom icon is returned, if one has been assigned. Otherwise, the default icon is returned.	404 - Not Found 401 - Unauthorized 200 - OK

Example of Using GET for Management Portal Properties

This example demonstrates how to obtain a list of properties that the user is authenticated to manage.

URI:

This example uses the following URI:

```
https://Jeff245.cloudpath.net/admin/rest/propertyMgmtPortals/  
MduPortalAccess-62e5f7e6-010e-46ff-91c9-4e71b6168159/properties
```

where:

- https://Jeff245.cloudpath.net/admin/rest/propertyMgmtPortals is the root URI (must include https, as shown).
- MduPortalAccess-62e5f7e6-010e-46ff-91c9-4e71b6168159 is the GUID of the management portal.

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 173 Request Headers

Key	Value
Content-type	application/json
Authorization	eyJhbGciOiJIUzI1NiJ9.eyJzdWiiOiJMYWtlIFZpZXcgQXBhcnRtZW50cyB5BNW5hZ2VtZW50IFBvcnRhbC1sbnBvcnRhbEd1aWQjOiJNZHVQb3JOYWxhY2Nlc3MtNzkyOTNhMzMtMjYyYy00MTViLTNmMGMtOTlYmMwMwVjVudFBrJoiMSlslVzZXJFbWVpbCl6ImplZmYucmhvZGllQGNvbW1zY29wZS5jb20iLCJwb3JOYWxTZWNyZXQiOiJzZWNyZXQjLjYXQjE2Mjg5MDcwbWV4cCl6MTYyODkwNzZM5NHO.F_h48OPwUI_F1KDFNpz8zFM1qQzbxYg5KRLyc7HR7IE

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 property or properties the user is authenticated to manage within the specified property management portal. In this example, "Tech Pubs Building 1" is the only property that Sushma A can manage. Also, the property is configured as part of a network segmentation group, as shown in the response for the boolean property: "usingNetworkSegmentation": true

```
{
  "page": {
    "page": 1,
    "pageSize": 1,
    "totalCount": 1
  },
  "contents": [
    {
      "guid": "Property-40ac7e72-97ed-4567-a180-7d20967c5a72",
      "name": "Tech Pubs Building 1 ",
      "address": "001 Tech Pubs Road\r\nLake Town, CA",
      "description": "",
      "enforceMaxUnits": false,
      "maxUnits": 0,
      "allowSeparateGuestSecret": true,
      "ssids": [
        "Jeff eDPSK"
      ],
      "managementName": "Sushma A",
      "managementPhone": "0005550200",
      "managementEmail": "sushma@commscope.com",
      "tenantPortalHelpText": "",
      "tenantPortalAnnouncements": "",
      "sendEmail": true,
      "sendSms": true,
      "smsPassphraseChange": null,
      "emailPassphraseSubject": null,
      "emailPassphraseChange": null,
      "smsAssignedUnit": null,
      "emailAssignedUnitSubject": null,
      "emailAssignedUnit": null,
      "usingNetworkSegmentation": true,
      "links": [
        {
          "rel": "self",
          "href": "https://jeff245.cloudpath.net/admin/rest/propertyMgmtPortals/MduPortalAccess-62e5f7e6-010e-46ff-91c9-4e71b6168159/properties/Property-40ac7e72-97ed-4567-a180-7d20967c5a72",
          "hreflang": null,
          "media": null,
          "title": null,
          "type": null,
          "deprecation": null
        }
      ]
    }
  ]
}
```

```

    },
    {
      "rel": "units",
      "href": "https://jeff245.cloudpath.net/admin/rest/propertyMgmtPortals/
MduPortalAccess-62e5f7e6-010e-46ff-91c9-4e71b6168159/properties/Property-40ac7e72-97ed-4567-
a180-7d20967c5a72/units?page=1&pageSize=10{&filter,orderBy}",
      "hreflang": null,
      "media": null,
      "title": null,
      "type": null,
      "deprecation": null
    },
    {
      "rel": "mgmtPortal",
      "href": "https://jeff245.cloudpath.net/admin/rest/propertyMgmtPortals/
MduPortalAccess-62e5f7e6-010e-46ff-91c9-4e71b6168159",
      "hreflang": null,
      "media": null,
      "title": null,
      "type": null,
      "deprecation": null
    }
  ]
}
]
}

```

Units (Property Management)

You can use property management API calls to obtain information about existing units, to update details about a unit, or to add a unit to a property.

Updates that are allowed on a unit are based on the access control fields that have been defined for the applicable management portal configuration in the Cloudpath UI. Refer to the *Cloudpath Enrollment System Property Management Administration Guide* for more information.

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 (< >).

NOTE

In the "Editable" column below, "yes" indicates that a property is editable provided that the administrator enabled these properties using the access controls defined in the corresponding management portal.

TABLE 174 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 "TOKEN_RESET", "SUSPENDED", or "ACTIVE".
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.

TABLE 174 Resource: Unit (continued)

Property Name	Type	Editable	Sort/Filter	Optional in Request/Response Body?	Description
apiHashSecret	String	No	No	Yes	The unique secret needed to access the tenant portal APIs. For more information, see Tenant Portal API Requirements on page 181.
maxDeviceCount	int	No	no	Yes	The maximum number of devices permitted for this unit.
guestMaxDeviceCount	int	No	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 Table 64 on page 92. All "contact" properties can be set from this URI.
vlan	String	Yes	No	Yes	The vlan applied to the unit when the unit is created. If vlan override is set, the vlan is returned on a GET call. The vlan cannot be changed on a PUT, but it can be set on a create.
guestVlan	String	Yes	No	Yes	The vlan applied to the unit when the unit is created. If vlan override is set, the vlan is returned on a GET call. The vlan cannot be changed on a PUT, but it can be set on a create.
expirationDate	DateTime	No	Neither	Yes	Iso 80601 DateTime that indicates when this wifi passphrase expires.
guestExpirationDate	DateTime	Yes	Neither	Yes	Iso 80601 DateTime that indicates when this guest wifi passphrase expires.
networkSegmentationDetails	Network Segmentation Details	No	No	Yes	If the unit is part of a property that is in a network segmentation group, this resource specifies the network segmentation details (described later in this section) 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"> • Self-referencing link • Property link • Tenant portal link

TABLE 175 Resource: Network Segmentation Details

Property Name	Type	Editable	Sort/Filter	Optional in Request/Response Body?	Description
vni	Number	No	No	Yes	The VNI assigned to this unit.
assignedAccessPoint	Assigned Access Point	No	No	Yes	The access point details assigned to the unit.

TABLE 176 Resource: Assigned Access Point

Property Name	Type	Editable	Sort/Filter	Optional in Request/Response Body?	Description
szName	String	No	No	Yes	The name of the associated access point.
ethernetPorts	List	No	No	Yes	The ethernet ports assigned to this unit.

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 177 Units URIs and Actions

URI	Action	Description	Return Codes
/propertyMgmtPortals/{portalGuid}/properties/{propertyGuid}/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, and creates the DPSKs for the unit. The DPSKs are assigned the secrets provided in the request body; if no secrets are specified, they are automatically generated and assigned. If the API call is not permitted by access controls configured in Cloudpath management portal configuration, a "403 - Forbidden" message is returned.	201- Created 401 - Unauthorized 403- Forbidden
/propertyMgmtPortals/{portalGuid}/properties/{propertyGuid}/units/{guid}	GET	Returns information about the specified unit.	200- OK 404 - Not Found 401 - Unauthorized 403- Forbidden
	PUT	Updates details about the unit. Updates that are allowed on a unit are based on the access control fields that have been defined for the applicable management portal configuration in the Cloudpath UI. Refer to the <i>Cloudpath Enrollment System Property Management Administration Guide</i> for more information. If the change requested is not permitted by access controls, a "403 - Forbidden" message is returned.	200- OK 404 - Not Found 401 - Unauthorized 403- Forbidden
	DELETE	Removes the unit, the DPSKs associated with the unit, and any devices associated with those DPSKs. If this API call not permitted by access controls, a "403 - Forbidden" is returned.	204 - No content 200 - OK 401 - Unauthorized 403- Forbidden

Example of Using GET for Units

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

URI:

This example uses the following URI:

```
https://Jeff245.cloudpath.net/admin/rest/propertyMgmtPortals/
MduPortalAccess-79293a33-262c-415b-8f0c-98ebc01eb503/properties/Property-4567d598-5a6d-4847-
b9d5-32f7ba34df8d/units
```

where:

- <https://Jeff245.cloudpath.net/admin/rest/> is the root URI of the Cloudpath system being used (must include https, as shown)
- MduPortalAccess-79293a33-262c-415b-8f0c-98ebc01eb503 is the GUID of the management portal.

Property Management APIs
Units (Property Management)

```
        "href": "https://jeff245.cloudpath.net/admin/rest/propertyMgmtPortals/
MduPortalAccess-79293a33-262c-415b-8f0c-98ebc01eb503/properties/Property-4567d598-5a6d-4847-
b9d5-32f7ba34df8d",
        "hreflang": null,
        "media": null,
        "title": null,
        "type": null,
        "deprecation": null
    },
    {
        "rel": "self",
        "href": "https://jeff245.cloudpath.net/admin/rest/propertyMgmtPortals/
MduPortalAccess-79293a33-262c-415b-8f0c-98ebc01eb503/properties/Property-4567d598-5a6d-4847-
b9d5-32f7ba34df8d/units/Unit-d289217b-80c3-4abd-86ab-df8d8a7a3108",
        "hreflang": null,
        "media": null,
        "title": null,
        "type": null,
        "deprecation": null
    },
    {
        "rel": "tenantPortal",
        "href": "https://jeff245.cloudpath.net/tenant?&auth=CPNENCv2%3ABC%7C5F7EE7E1-3A45-41BB-
A5B9-65FC34A88050%7Clmd%2BMLR73Iz75jArKzhydA%3D%3D%3ARP9WmjP3ErSjhjxTWB1NyA%3D
%3D&property=Property-4567d598-5a6d-4847-b9d5-32f7ba34df8d&api=UUBqrkAaJKs2",
        "hreflang": null,
        "media": null,
        "title": null,
        "type": null,
        "deprecation": null
    }
]
},
{
    "guid": "Unit-b7d7f0d0-e2fa-4802-b2de-da6970889aa1",
    "number": "Apartment 6",
    "description": "",
    "status": "ACTIVE",
    "secret": "lgovrjqoxbsk",
    "guestSecret": "wtpmrtyvflc",
    "apiHashSecret": "CPNENCv2:BC|5731D43E-7AC4-4720-9DDE-FFFF34621B83|
rhhZGDqgli72koSVUM19w==:X0iPLkN01bCqaeRTsi7orA==",
    "contact": {
        "contactName": "Mary Matheson",
        "phoneNumber": "000-555-0106",
        "email": "mm@matheson.com",
        "links": [
            {
                "rel": "smsCountryCode",
                "href": "https://jeff245.cloudpath.net/admin/publicApi/system/smsCountryCodes/
12310",
                "hreflang": null,
                "media": null,
                "title": null,
                "type": null,
                "deprecation": null
            }
        ]
    },
    "vlan": "6",
    "guestVlan": "6",
    "links": [
        {
            "rel": "property",
            "href": "https://jeff245.cloudpath.net/admin/rest/propertyMgmtPortals/
MduPortalAccess-79293a33-262c-415b-8f0c-98ebc01eb503/properties/Property-4567d598-5a6d-4847-
b9d5-32f7ba34df8d",
            "hreflang": null,
            "media": null,
            "title": null,
            "type": null,
            "deprecation": null
        }
    ]
}
```



```

    },
    {
      "rel": "self",
      "href": "https://jeff245.cloudpath.net/admin/rest/propertyMgmtPortals/
MduPortalAccess-79293a33-262c-415b-8f0c-98ebc01eb503/properties/Property-4567d598-5a6d-4847-
b9d5-32f7ba34df8d/units/Unit-b7d7f0d0-e2fa-4802-b2de-da6970889aa1",
      "hreflang": null,
      "media": null,
      "title": null,
      "type": null,
      "deprecation": null
    },
    {
      "rel": "tenantPortal",
      "href": "https://jeff245.cloudpath.net/tenant?&auth=CPNENCv2%3ABC
%7CE5572AFF-1B4E-4B0C-82B7-D4A3A3502021%7CvE8Uc6%2Bi03OsKo5dUu5brw%3D%3D%3AXpv7FwxNVv1KqhYxz5vDuw%3D
%3D&property=Property-4567d598-5a6d-4847-b9d5-32f7ba34df8d&api=UUBqrkAaJKs2",
      "hreflang": null,
      "media": null,
      "title": null,
      "type": null,
      "deprecation": null
    }
  ]
},
{
  "guid": "Unit-a94dd1f4-d2ed-4879-a577-da1d9d00a621",
  "number": "Apartment 7",
  "description": "",
  "status": "ACTIVE",
  "secret": "vykmbuhiwpnz",
  "guestSecret": "goiapafxfizl",
  "apiHashSecret": "CPNENCv2:BC|1082ECE8-8A8D-4062-A5B3-DC32A5C9FCE7|fvOy1h3/
t1Ewc0T3hsGITw==:OFxrkdL0N6fRtsEyxX2jEw==",
  "contact": {
    "contactName": "Jake Sterling",
    "phoneNumber": "000-555-0107",
    "email": "js@sterling.com",
    "links": [
      {
        "rel": "smsCountryCode",
        "href": "https://jeff245.cloudpath.net/admin/publicApi/system/smsCountryCodes/
12310",
        "hreflang": null,
        "media": null,
        "title": null,
        "type": null,
        "deprecation": null
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    ]
  },
  "vlan": "7",
  "guestVlan": "7",
  "links": [
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      "href": "https://jeff245.cloudpath.net/admin/rest/propertyMgmtPortals/
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b9d5-32f7ba34df8d",
      "hreflang": null,
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      "title": null,
      "type": null,
      "deprecation": null
    }
  ],
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    "rel": "self",
    "href": "https://jeff245.cloudpath.net/admin/rest/propertyMgmtPortals/
MduPortalAccess-79293a33-262c-415b-8f0c-98ebc01eb503/properties/Property-4567d598-5a6d-4847-
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    "hreflang": null,
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  }
}

```

Property Management APIs
Units (Property Management)

```

        "title": null,
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    {
        "rel": "tenantPortal",
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E903-490D-8E55-C40EEA5D8730%7CZh%2FI7b3bYp0SQ5CX7pz3yQ%3D%3D%3AYdFRoole8A4Z9ftU1wdMWA%3D
%3D&property=Property-4567d598-5a6d-4847-b9d5-32f7ba34df8d&api=UUBqrkAaJKs2",
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]
},
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    "number": "Apartment 8",
    "description": "",
    "status": "ACTIVE",
    "secret": "xvusroyzaqol",
    "guestSecret": "opzqxjvjoj",
    "apiHashSecret": "CPNENCv2:BC|C8D17978-2D4C-459B-912B-34E0CC77B686|+P+9hqEnJjt1ml73U3r7Xg==:Os
+3/vI4CKuoN8L3OnThdA==",
    "contact": {
        "contactName": "Zack Jordan",
        "phoneNumber": "000-555-0108",
        "email": "zj@jordan.com",
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                "rel": "smsCountryCode",
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12310",
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            "title": null,
            "type": null,
            "deprecation": null
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b9d5-32f7ba34df8d/units/Unit-8b4e9a86-9373-431f-b88b-d82d12c643d0",
            "hreflang": null,
            "media": null,
            "title": null,
            "type": null,
            "deprecation": null
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```

```
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]  
}
```



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