

Using Cloudpath APIs to Interact With External Systems

Supporting Software Release 5.2

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How to Use The Cloudpath API

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Overview

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

Outbound: Sending Notifications to External Systems

You can pass data from Cloudpath using notifications through email or URL requests. Variables are populated in the Enrollment Record and may be passed through the URL call.

For example, you might want to include enrollment data in a certificate issuance notification email. In this case, the URL containing the variables is sent to the server using a simple GET request, and the HTTP reply is the result data, included as part of the email notification.

NOTE

Some API calls support POST requests. If supported, POST is listed in the parameters.

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 to view available variables, variable syntax, and expected values.

The variables are passed through a URL as in this example: `http://test.company.net/registration?user=${USERNAME}&mac=${MAC_ADDRESS}`. The result from this example would be the username and device MAC address sent within the notification.

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.

NOTE

We recommend that you use URL requests for large amounts of data. Send the enrollment GUID value in the REST URL and then query the Cloudpath system for the enrollment record.

Inbound: Querying Cloudpath

You can retrieve information from Cloudpath through a REST type API query and perform an action, based on the result data. For example, you might use an API query to block a user or revoke a certificate.

The API query, containing the identifier information and appropriate action, is sent to the server and the objects are returned in either JSON or XML.

The RESTAPI call is structured as follows:

http://test.company.net/admin/api/zAdBCLcgrwca/enrollment/IdentityCN/bob/get

- **http://test.company.net/admin** = HTTP authentication
- **api** = API entry point
- **zAdBCLcgrwca** = API key
- **enrollment** = realm
- **IdentityCN** = Identity type
- **bob** = Identity value
- **get** = Action

Each realm allows a different set of identity information. See the appropriate sections in API Examples for the list of valid identity types.

Creating an API Key

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

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

FIGURE 1 Create API Key

The screenshot shows a web interface for creating an API key. At the top, there is a breadcrumb navigation: "Configuration > API Keys > Create". To the right of the breadcrumb are two buttons: "Cancel" and "Save". Below the breadcrumb is a section titled "API Key Information". The form contains the following fields:

- Name:** A text input field containing "Device Capabilities".
- Description:** A large, empty text area.
- Enabled:** A checkbox that is checked.
- API Key:** A text input field containing "BmGsez6evQc8".
- Allowed Path Regex:** A text input field containing "*".
- Expiration Date:** A text input field containing "20180404".

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

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

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

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This section provides some common API queries for use with Cloudpath.

Enrollment Queries and Actions

When specifying which enrollment should be queried or manipulated by a request, the enrollments can be specified in various formats, such as *Pk*, *Guid*, *MACAddress*, *Username*, *AssistanceId*, and *Email*. Many of the requests contain a section similar to *Username/bob*, meaning any environment where the *username* is *bob*.

Retrieve Enrollment Data

Returns data for the specified enrollment.

Resource URIs

URI	Description
/admin/api/{API_KEY}/enrollment/{IDENTITY_TYPE}/{IDENTITY_VALUE}/get	Get enrollment data

Example

http://test.company.net/admin/api/zAdBCLcgrwca/enrollment/Username/bob/get

Revoke/Unrevoke Enrollment

Revoke (or unrevoke) the specified enrollment.

Resource URIs

URI	Description
/admin/api/{API_KEY}/enrollment/{IDENTITY_TYPE}/{IDENTITY_VALUE}/revoke	Revoke enrollment
/admin/api/{API_KEY}/enrollment/{IDENTITY_TYPE}/{IDENTITY_VALUE}/unrevoke	Unrevoke enrollment

Examples

<http://test.company.net/admin/api/zAdBCLcgrwca/enrollment/Email/bob@company.net/revoke>

<http://test.company.net/admin/api/zAdBCLcgrwca/enrollment/MACAddress/A1:B2:C3:D4:E5:F6/unrevoke>

Certificate Queries

When specifying which certificate should be queried or manipulated by a request, the certificates can be specified in various formats, such as *Pk*, *Cn*, and *Serial*.

Generate Certificate

Generates a certificate based on the CSR provided. This query supports description (optional) and CUSTOM_VARIABLES (any variable used in the certificate template).

Resource URIs

URI	Description
/admin/api/{API_KEY}/certificate/generate	Generate Certificate

GET/POST Parameters

csr

Required

certificateTemplateName

Required. Required. Name of certificate template in Cloudpath from which to issue.

Examples

[http://test.company.net/admin/api/zAdBCLcgrwca/certificate/ generate?
csr={CSR}&certificateTemplateName=TestCompanyTemplate](http://test.company.net/admin/api/zAdBCLcgrwca/certificate/generate?csr={CSR}&certificateTemplateName=TestCompanyTemplate)

Generate a P12 Certificate

Generates a certificate in P12 format, without a CSR. This query supports description (optional) and CUSTOM_VARIABLES (any variable used in the certificate template).

Resource URIs

URI	Description
/admin/api/{API_KEY}/certificate/generateP12	Generate P12 certificate

GET/POST Parameters

certificateTemplateName

Required. Required. Name of certificate template in Cloudpath from which to issue.

password

Required. Password to use to encrypt the P12. May be left blank if not encrypted.

validForDaysOverride

Optional. If provided, this overrides the certificate template's validity period.

Examples

http://test.company.net/admin/api/zAdBCLcgrwca/certificate/ generateP12?
certificateTemplateName=ServerTemplate&password=test

Revoke/Unrevoke Certificate

Revoke the specified certificate.

Resource URIs

URI	Description
/admin/api/{API_KEY}/certificate/{IDENTITY_TYPE}/{IDENTITY_VALUE}/revoke	Revoke certificate
/admin/api/{API_KEY}/certificate/{IDENTITY_TYPE}/{IDENTITY_VALUE}/unrevoke	Unrevoke certificate

Usage Guidelines

NOTE

For external CAs, the CA must support unrevoke.

Examples

http://test.company.net/admin/api/zAdBCLcgrwca/certificate/Pk/235/revoke

Unrevoke the specified certificate

http://test.company.net/admin/api/zAdBCLcgrwca/certificate/Cn/bob@company.net/unrevoke

Return Certificate Data

Returns data about the specified certificate.

Resource URIs

URI	Description
/admin/api/{API_KEY}/certificate/{IDENTITY_TYPE}/{IDENTITY_VALUE}/get	Get certificate data

Examples

<http://test.company.net/admin/api/zAdBCLcgrwca/certificate/Serial/d8a76ccc42e6f3c5048fee0aa7d6e411841db54b/get>

Revoke Certificate by Certificate Serial Number

Revokes a certificate with a specified serial number.

Resource URIs

URI	Description
/admin/api/{apiKey}/certificate/Serial/{serialNumber}/revoke	Revoke certificate by serial number

GET/POST Parameters

serialNumber

Required. Serial number of the certificate.

reason

Optional. Description of why the certificate was revoked

Examples

<http://test.company.net/admin/api/zAdBCLcgrwca/certificate/Serial/00fde721f1bb5e45e3feb7b49e1e8728b561936b/revoke>

User Queries

When specifying which user should be queried or manipulated by a request, the user can be specified in various formats, such as IdentityCN, IdentityDN, CertificateCN, CertificateSerial, and Email. Many of the requests contain a section similar to Email/bob@company.net, meaning any environment where the Email is bob@company.net.

Blocking/Unblocking User

Blocks the specified user account, which includes revoking all associated certificates and MAC registrations, and prevents the user from enrolling again.

Resource URIs

URI	Description
/admin/api/{API_KEY}/user/{IDENTITY_TYPE}/{IDENTITY_VALUE}/block	Block user
/admin/api/{API_KEY}/user/{IDENTITY_TYPE}/{IDENTITY_VALUE}/unblock	Unblock user

Examples

<http://test.company.net/admin/api/zAdBCLcgrwca/user/IdentityCN/bob/block>

Unblocks the specified user account:

<http://test.company.net/admin/api/zAdBCLcgrwca/user/CertificateCN/bob/unblock>

Revoke Enrollments

Revokes all enrollments for the user account, which includes revoking all associated certificates and MAC registrations. This does not block the user account, and allows the user to enroll again.

Resource URIs

URI	Description
/admin/api/{API_KEY}/user/{IDENTITY_TYPE}/{IDENTITY_VALUE}/revokeAll	Revoke all enrollments

Examples

<http://test.company.net/admin/api/zAdBCLcgrwca/user/Email/bob@company.net/revokeAll>

Device Queries

When specifying which device should be queried or manipulated by a request, the devices can be specified by *MACAddress*. Many of the requests contain a section similar to *MACAddress/A1:B2:C3:D4:E5:F6*, meaning any environment where the device *MACAddress* is A1:B2:C3:D4:E5:F6.

Block/Unblock Device

Blocks the specified device.

Resource URIs

URI	Description
/admin/api/{API_KEY}/device/{IDENTITY_TYPE}/{IDENTITY_VALUE}/block	Block the specified device
/admin/api/{API_KEY}/device/{IDENTITY_TYPE}/{IDENTITY_VALUE}/unblock	Unblock the specified device

Examples

<http://test.company.net/admin/api/zAdBCLcgrwca/device/MACAddress/A1:B2:C3:D4:E5:F6/block>

Unblocks the specified device:

<http://test.company.net/admin/api/zAdBCLcgrwca/device/MACAddress/A1:B2:C3:D4:E5:F6/unblock>

Revoke Certificates

Revokes all certificate for the specified device.

Resource URIs

URI	Description
/admin/api/{API_KEY}/device/{IDENTITY_TYPE}/{IDENTITY_VALUE}/revokeAll	Revoke all certificate fora device

Examples

http://test.company.net/admin/api/zAdBCLcgrwca/device/MACAddress/A1:B2:C3:D4:E5:F6/revokeAll

Register MAC address

Registers the MAC address for the specified device to a specified MAC Registration list.

Resource URIs

URI	Description
/admin/api/{API_KEY}/device/registerMac	Register MAC Address

GET/POST Parameters

macRegistrationName

Required. The name of the MAC registration list.

macAddress

Required. The MAC address to register.

username

Optional. If specified, this value is saved as the associated username.

email

Optional. If specified, this value is saved as the associated email.

deviceName

Optional. If specified, this value is saved as the device name.

location

Optional. If specified, this value is saved as the location.

expirationDate

Optional. If specified, this value overrides the default expiration date.

Usage Guidelines

NOTE

The expiration Date must be entered using the UNIX time format (yyyymmdd), regardless of the date format of the system.

Examples

http://test.company.net/admin/api/zAdBCLcgrwca/device/registerMac?
macRegistrationName=MacRegList1&macAddress=A1:B2:C3:D4:E5:F6

Device Configuration Queries and Actions

Generate Mobileconfig File

Generates a signed mobileconfig file containing a certificate and device configuration. This query supports the optional parameters for `validForDaysOverride` and `description`, and `CUSTOM_VARIABLES` (any variable used in the certificate template must also be provided as a parameter).

Resource URIs

URI	Description
/admin/api/{API_KEY}/deviceConfig/generateMobileconfig	Generate Mobileconfig file

GET/POST Parameters

deviceConfigName

Required. Name of the device configuration in Cloudpath from which to use.

certificateTemplateName

Required. Name of certificate template in Cloudpath from which to issue.

validForDaysOverride

Optional. If not zero, this overrides the expiration date specified in the certificate template.

Examples

http://test.company.net/admin/api/zAdBCLcgrwca/deviceConfig/generateMobileconfig?
deviceConfigName=SecureNetwork1&certificateTemplateName=CertTemplate1

External Queries

Certain external queries (**checkCapability** and **authorizeDevice**) require the location URL name, which is specified in the URL Name field on the **Configuration** > **Workflows** Properties tab.

FIGURE 2 Location URL Name

The screenshot shows a web interface for configuring workflows. At the top, there is a breadcrumb 'Configuration > Workflows' and an 'Add Workflow' button. Below this is a table with columns: Workflows, Status, Published URL, and Last Publish Time. The table contains one entry: 'Production' with a 'Published' status, a URL starting with '/enroll/Anna44TestXPC/Production/', and a last publish time of '20170404 1035 MDT'. Below the table are tabs for 'Properties', 'Enrollment Process', 'Look & Feel', 'Snapshot(s)', and 'Advanced'. The 'Properties' tab is selected, showing a 'Save' button and two sections: 'Workflow Properties' and 'Enrollment Portal URL Options'. In 'Workflow Properties', the 'Name' field is 'Production' and the 'Description' field is empty. In 'Enrollment Portal URL Options', the 'URL Name' field is 'Production', and the 'Enable DNS Shortcut' and 'Enforce Required Parameters' checkboxes are unchecked.

Workflows	Status	Published URL	Last Publish Time
Production	Published	/enroll/Anna44TestXPC/Production/	20170404 1035 MDT

Workflow Properties

Name: Production *

Description:

Enrollment Portal URL Options

URL Name: Production

Enable DNS Shortcut:

Enforce Required Parameters:

The examples in this section use Production for the locationUrlName.

Device Capabilities Query

Queries the capabilities of a device based on the user agent and device configuration. An HS2R1 or HS2R2 response value is returned only if the HS2R1/HS2R2 SSID Type has been set for the device configuration.

Resource URIs

URI	Description
/admin/api/{apiKey}/external/{locationUrlName}/checkCapability	Queries device capability

GET/POST Parameters

userAgent

Required. A string representing the user agent of a device.

screenHeight

Optional. Necessary to exclude iPhone 4s and iPad 2 and earlier devices from hotspot 2 support.

screenWidth

Optional. Necessary to exclude iPhone 4s and iPad 2 and earlier devices from hotspot 2 support.

Examples

[http://test.company.net/admin/api/zAdBCLcgrwca/external/Production/checkCapability?userAgent=Mozilla%2F5.0%20\(iPad%3B%20CPU%20OS%20_3%20like%20Mac%20OS%20X\)%20AppleWebKit%2F537.51.1%20\(KHTML%2C%20like%20Gecko\)%20CriOS%2F30.0.1599.12%20Mobile%2F11A465%20Safari%2F8536.25%20](http://test.company.net/admin/api/zAdBCLcgrwca/external/Production/checkCapability?userAgent=Mozilla%2F5.0%20(iPad%3B%20CPU%20OS%20_3%20like%20Mac%20OS%20X)%20AppleWebKit%2F537.51.1%20(KHTML%2C%20like%20Gecko)%20CriOS%2F30.0.1599.12%20Mobile%2F11A465%20Safari%2F8536.25%20)

Device Authorization

Authorizes a device using the customer account number and optional parameters

Resource URIs

URI	Description
/admin/api/{apiKey}/external/{locationUrlName}/authorizeDevice	Authorize a device

GET/POST Parameters

externalId

Required. A string representing the customer account number. This can be up to 14 characters.

macAddress

Optional. The device MAC address, formatted as aa:bb:cc:dd:ee:ff.

userAgent

Optional. A string representing the user agent of a device.

username

Optional. Username of the device.

screenHeight

Optional. Necessary to exclude iPhone 4s and iPad 2 and earlier devices from hotspot 2 support.

screenWidth

Optional. Necessary to exclude iPhone 4s and iPad 2 and earlier devices from hotspot 2 support.

Usage Guidelines

NOTE

The *userAgent* parameter is optional. However, if the user agent is not part of the enrollment record, other API calls may not return the correct OS family.

Optional parameters, if specified, are set in the device record.

Examples

```
http://test.company.net/admin/api/zAdBCLcgrwca/external/Production/authorizeDevice?  
externalId=123456789012&macAddress=aa:bb:cc:dd:ee:ff&username=bob&userAgent=Mozilla%2F5.0%20(iPad%3B  
%20CPU%20OS%208_3%20like%20Mac%20OS%20X)%20AppleWeb%20Kit%2F537.51.1%20(KHTML%2C%20like%20Gecko)  
%20CriOS%2F30.0.1599.12%20Mobile%2F11A46%20Safari%2F8536.25%20
```

Change MAC Address

Changes the MAC address for an enrollment record.

Resource URIs

URI	Description
/admin/api/{apiKey}/external/changeMac	Change MAC address for enrolment record

GET/POST Parameters

externalId

Required. A string representing the customer account number. This can be up to 14 characters

oldMacAddress

Required. The MAC address currently populated in the enrollment record, formatted as aa:bb:cc:dd:ee:ff.

newMacAddress

Required. The new MAC address to be set in the enrollment record, formatted as aa:bb:cc:dd:ff.

Examples

```
http://test.company.net/admin/api/zAdBCLcgrwca/external/changeMac?  
externalId=123456789012&oldMacAddress=aa:bb:cc:dd:ee:ff&newMacAddress=11:22:33:44:55:66
```

Get Device Information by Certificate Serial Number

Queries the customer account number and MAC address associated with a certificate serial number. The associated information is returned regardless of revocation status.

Resource URIs

URI	Description
/admin/api/{apiKey}/external/getDeviceBySerialNumber	Get device information by serial number

GET/POST Parameters

certificateSerialNumber

Required. The serial number of the client certificate to query, formatted 00fde721f1bb5e45e3feb7b49e1e8728b561936b. The serial number must be exactly 40 characters. If less than 40 characters, the value must be left-padded with zeros.

Examples

http://test.company.net/admin/api/zAdBCLcgrwca/external/getDeviceBySerialNumber?certificateSerialNumber=00fde721f1bb5e45e3feb7b49e1e8728b561936b

Get Devices Associated with a Customer Account Number

Returns all devices associated with a customer account number.

Resource URIs

URI	Description
/admin/api/{apiKey}/external/getDevices	Get devices with customer account number

GET/POST Parameters

externalId

Required. A string representing the customer account number. This can be up to 14 characters.

includeRevoked

Optional. If '1', the response includes revoked enrollments and certificates. If not specified or '0', revoked enrollments and certificates are excluded from the response.

Usage Guidelines

NOTE

This call places a heavy load on the system.

Examples

http://test.company.net/admin/api/zAdBCLcgrwca/external/getDevices?externalId=123456789012

Get Device Information by MAC Address and Customer Account Number

Returns the data associated with a customer account number and specified MAC address.

Resource URIs

URI	Description
/admin/api/{apiKey}/external/getDeviceByMacAddress	Get device information by MAC Address and customer account

GET/POST Parameters

externalId

Required. A string representing the customer account number. This can be up to 14 characters.

macAddress

Required. The device MAC address, formatted as aa:bb:cc:dd:ee:ff.

Examples

`http://test.company.net/admin/api/zAdBCLcgrwca/external/
getDeviceexternalId=CustomerA&macAddress=00:bb:cc:dd:ee:ff`

Revoke Certificate by MAC Address and Customer Account Number

Revokes one or more certificates associated with a customer account number and specified MAC address.

Resource URIs

URI	Description
/admin/api/{apiKey}/external/revokeByMacAndExternalId	Revoke certificate for customer account

GET/POST Parameters

externalId

Required. A string representing the customer account number. This can be up to 14 characters.

macAddress

Required. The device MAC address, formatted as aa:bb:cc:dd:ee:ff.

destroy

Optional. If specified and set to '1', the enrollment record(s) are permanently deleted rather than revoked. This causes the enrollment record and all associated data (including certificates) to be permanently deleted. After deletion, the log will be the only record of the existence of the certificate. OCSP responses will be "not found".

Examples

`http://test.company.net/admin/api/zAdBCLcgrwca/external/revokeByMacAndExternalId?
externalId=CustomerA&macAddress=00:bb:cc:dd:ee:ff`

Clear Device Capability Cache (For Testing Only)

This method allows the cache to be flushed without restarting the server.

Resource URIs

URI	Description
/admin/api/{apiKey}/external/clearCache	Clear the cache

Usage Guidelines

NOTE

Caching occurs by a combination of the user agent and location. The only time the cache should need to be cleared is if the location's device configuration is changed.

Examples

<http://test.company.net/admin/api/zAdBCLcgrwca/external/clearCache>

Destroy Enrollment Records by Customer Account Number (For Testing Only)

Allows a call to destroy all elements for a specified customer account number.

Resource URIs

URI	Description
/admin/api/{apiKey}/external/destroyByExternalIdForTestingOnly	Clear customer record

GET/POST Parameters

externalId

Required. The customer account number for which all enrollments will be destroyed. If the externalId is blank, this call is ignored by the system.

Examples

<http://test.company.net/admin/api/zAdBCLcgrwca/external/destroyByExternalIdForTestingOnly?externalId=CustomerA>

Destroy Enrollment Records by GUID

This method allows a caller to destroy all data related to an enrollment based on the enrollment's GUID. This causes the enrollment record and all associated data (including certificates) to be permanently deleted.

Resource URIs

URI	Description
/admin/api/{apiKey}/external/destroyByEnrollmentGuid	Destroy enrollment data

GET/POST Parameters

guid

Required. The GUID for the enrollment to be destroyed.

Usage Guidelines

NOTE

After deletion, the log will contain the only record of the existence of the certificate in the system. OSCP responses will be "not found".

The system logs a message (at INFO level) containing the enrollment GUID, MAC address, external ID, certificate PK, certificate serial number, certificate thumbprint, certificate expiration date, MAC registration PK, and the MAC registration expiration date. If permanent storage is desired, use the syslog.

Examples

<http://test.company.net/admin/api/zAdBCLcgrwca/external/destroyByEnrollmentGuid?guid=xyz>

Modifying Settings in Cloudpath

Settings can be manipulated using REST APIs. When specifying which setting should be manipulated by a request, specify the OBJECT_GUID for passphrase information, and the desired parameter for voucher information. See the appropriate Parameters section for details.

Return Passphrase Information

Returns information about the specified shared passphrase.

Resource URIs

URI	Description
/admin/api/{API_KEY}/object/ss/{OBJECT_GUID}/get	Get passphrase information

Examples

`http://test.company.net/admin/api/zAdBCLcgrwca/object/ss/SharedSecretPrompt-FC1C020C-6A62-4581-B661-18ED883831C2/get`

Return Passphrase String

Returns only the shared passphrase string for a shared passphrase.

Resource URIs

URI	Description
<code>/admin/api/{API_KEY}/object/ss/{OBJECT_GUID}/get/ss</code>	Get shared passphrase string

Examples

`http://test.company.net/admin/api/zAdBCLcgrwca/object/ss/SharedSecretPrompt-FC1C020C-6A62-4581-B661-18ED883831C2/get/ss`

Change Passphrase

Changes the shared passphrase.

Resource URIs

URI	Description
<code>/admin/api/{API_KEY}/object/ss/{OBJECT_GUID}/change</code>	Change passphrase

GET/POST Parameters

newSs

Optional. If specified, this value is used as the new shared passphrase. If not specified, a random shared passphrase is generated

length

Optional. If a random shared passphrase is generated, this will be the length of it.

Examples

`http://test.company.net/admin/api/zAdBCLcgrwca/object/ss/SharedSecretPrompt-FC1C020C-6A62-4581-B661-18ED883831C2/change?newSs=brandnewpassphrase`

Create Voucher Object

Sets a value in the voucher.

Resource URIs

URI	Description
/admin/api/{API_KEY}/object/otp/{OBJECT_GUID}/create	Create a voucher

GET/POST Parameters

name

Optional. If specified, this value will be set as the name in the voucher.

company

Optional. If specified, this value will be set as the company in the voucher.

email

Optional. If specified, this value will be set as the email in the voucher.

sponsor

Optional. If specified, this value will be set as the sponsor in the voucher.

accessDays

Optional. If specified, this value will be set as the number of days of access in the voucher.

sms

Optional. If specified, this value will be set as the SMS in the voucher.

otp

Optional. If specified, this value will be set as the voucher in the voucher. If not specified, a random voucher will be generated.

sendEmail

Optional. Defaults to 1. If 1, the user will be emailed the voucher code (if an email is populated).

sendSms

Optional. Defaults to 1. If 1, the user will be sent the voucher code (if an SMS is populated) via SMS.

daysToRedeem

Optional. Defaults to 3. If specified, this is the number of days within which the voucher must be redeemed.

Examples

```
http://test.company.net/admin/api/zAdBCLcgrwca/object/otp/xyz/ create?  
name=bob&email=bob@test.com&sendEmail=1
```

Troubleshooting

To assist with troubleshooting, append the following to the API query.

- Append `?debug=true` for diagnostics.
- Append `?format=xml` for XML formatted response on GETs.

TABLE 1 Common API Error Messages

Error Code	Error Message
204	No records found matching parameters.
400	Invalid parameter or value.
401	Unauthorized.
500	Internal Server Error.