

Developer Guide

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Polycom[®] RealPresence[®] Platform API



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About This Book

This preface describes the:

- Scope of this document
- Intended audience
- Related documents

Scope of This Document

This document shows you how to use the Polycom® RealPresence® Platform API to develop applications that allow a client programmable access to the Polycom RealPresence Resource Manager System and RealPresence Distributed Media Application™ (DMA™) System products.

- Getting Started introduces you to the technical concepts used in the API.
- API Services describes functional areas exposed by the API.
- Examples provides examples of the HTTP methods for each resource.

Intended Audience

This document is written for application developers. This document assumes that you are a developer, that you have a basic understanding of how applications are developed in your environment, and that you have a functional understanding of both HTTP and XML. Familiarity with Representational State Transfer (REST) architecture and principles is helpful, but not required.

RealPresence® Platform API Developer Content

The Polycom RealPresence® Platform API Developer Content .zip file includes:

- Sample Code A set of sample code files for this API.
- WADL Files The Web Application Description Language (WADL) files that are the basis of this API.
- XSD Files The referencing XML Schema files for the API.
- rpmp_apidev_us.pdf The Polycom RealPresence® Platform API Developer's Guide.
- WebHelp The RealPresence® Platform API Reference Guide help web. Go to index.htm to start the help.

Related Documents

While planning, developing, deploying, or troubleshooting your application, you may need to reference other Polycom® documents, listed below.

Polycom® RealPresence® Platform Application Programming Interface (API) Reference Guide.
 This Developer Guide and the Reference Guide are meant to be used together. The Developer Guide provides an overview, explains concepts and provides examples. The Reference Guide provides precise specifications of the API.

Polycom® RealPresence Resource Manager System and RealPresence DMA Systemdocuments

Since this API gives you programmable access to the Polycom[®] RealPresence Resource Manager system and the RealPresence Distributed Media ApplicationTM (DMATM) system features, you may wish to reference documents about those systems.

Documents from the RealPresence Resource Manager system and the RealPresence DMA™ system documentation sets provide additional information about administering those systems. They can be found on the Documents and Downloads link at: support.polycom.com.

- RealPresence DMA™ 7000 system documentation set
 http://support.polycom.com/PolycomService/support/us/support/network/management_scheduling/dma 7000.html
- RealPresence Resource Manager system documentation set
 http://support.polycom.com/PolycomService/support/us/support/network/management_scheduling/realpresence_resource_manager.html

Getting Started

Understanding Basic Concepts

The Polycom® RealPresence® Platform API uses an XML encoding over HTTPS transport. The API adheres to a Representational State Transfer (REST) architecture. This document assumes that the reader has a basic understanding of XML and HTTPS, and is unfamiliar with REST.

Resources and HTTP Methods

Each data object accessible through the API is modeled as a resource. Some example resources are *users*, *conference rooms*, *conferences*, and *conference participants*. Each resource is uniquely identified by a URL and is referenced by means of the URL path.

You access the API and manipulate resources by using standard REST conventions. Each API method is invoked using one of the following HTTP methods:

- GET performs a read operation.
 - This operation returns a representation of a resource. GET is guaranteed to be a "safe" operation. It will never modify the state of the system. GET typically takes no input except the resource URL, and typically returns HTTP headers and an XML document as output.
- POST performs a create operation.
 - This operation creates a new resource. POST is also used for operations that modify the state of the system that are more complex than simply updating a resource state. POST typically takes an XML document as input, and returns only HTTP headers as output.
- PUT performs an update operation.
 - This operation replaces the data for a resource with a new set of data. PUT typically takes an XML document as input, and returns only HTTP headers as output.
- DELETE performs a delete operation.

This operation removes a resource from the system. DELETE typically takes no input except the resource URL, and returns only HTTP headers as output.



Notes

- All four http methods are not always available for each resource. For example some resources only support GET.
- In the case of errors, any of the HTTP methods can return an XML plcm-error document.

Recommended HTTP GET Optimization (Conditional GET)

The use of an HTTP conditional GET ensures that representations are only returned back to the API client if the resource has changed. This reduces unnecessary network bandwidth consumption by eliminating the XML entity-body in the response.

As a result, the API client retrieves the Entity Tag (ETag) value from the initial HTTP GET. Now, the API client can specify this ETag in subsequent GET request's body or *If-None-Match* header. The server compares the request ETag value with the server's current, resource state.

If the developer adopts this approach, then the following rules apply:

- <EntityTag> field in the request body is always checked first. Only when it is not present, is Etag in the header then checked.
- If the ETag does not exist in the body or in the If-None-Match header, always return the full representation with an HTTP status code: 200 OK.
- If the ETag value exists in the body or in the If-None-Match header, but does not match the ETag of
 the server resource, then the server assumes that the resource has changed. As a result, the server
 returns the full representation with an HTTP status code of: 200 OK.
- If the ETag value exists in the body or in the *If-None-Match* header, and the values match the ETag
 of the server resource, then no representation is supplied in the HTTP response entity-body. The
 server returns with an HTTP status code of: 304 Not Modified.

Recommended HTTP PUT Request Concurrency Control (Conditional PUT)

The use of an HTTP conditional PUT ensures that resources are correctly modified by preventing lost updates.

As a result, the API client should be required to specify the previously retrieved representation's Entity Tag (ETag) value. This value will be added in subsequent PUT request's *If-Match* header. Alternatively, the ETag can be defined in the entity-body. Either way, one or both ETag value parameters must be defined. The server compares the request ETag value with the server's current, resource state.

If the developer adopts this approach, then the following rules apply:

- <EntityTag> field in the request body is always checked first. Only when it is not present, is Etag in the header then checked.
- If the ETag does not exist in the body or in the *If-Match* header, the server will respond with an error representation (PlcmError) that contains a descriptive message stating that the ETag is required.
 Also, the response must contain an HTTP status code: 428 Precondition Required.
- If the ETag value exists in the body and/or in the If-Match header, but does not match the ETag of
 the server resource, the server will respond with an error representation (PlcmError) that contains
 a descriptive message stating that the resource has changed on the server. Also, the response will
 contain the HTTP status code: 412 Precondition Failed.
- If the ETag value exists in the body and/or in the *If-Match* header, and the values match the ETag of
 the server resource, then the update can proceed. The HTTP response will contain an ETag header
 with the updated value, a resource link in the Location header, and an HTTP status code: 204 No
 Content.

Updating resources

Updating resources using the PUT method will completely replace the server's representation with the new version passed. For this reason, you should update a resource in the following way:

- GET the resource to be updated and its Etag.
- change values in the returned representation
- PUT the representation with the previously obtained Etag

Simple User Resource Example

Consider the pre-installed 'LOCAL\admin' user as an example.

Get Method

You can perform an HTTP GET request for this resource by typing the URL into a web browser.

The URL of a user is: https://<server>:<port>/api/rest/users/<domain>/<username>.

On the RealPresence DMA system "carrot" the URL for the local admin user resource is:

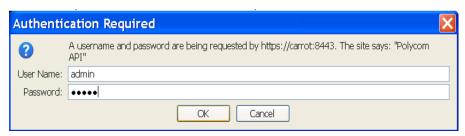
https://carrot:8443/api/rest/users/LOCAL/admin

On the RealPresence Resource Manager system "RPRM-01", the URL for the local user admin resource is:

• https://RPRM-01:8443/api/rest/users/LOCAL/admin

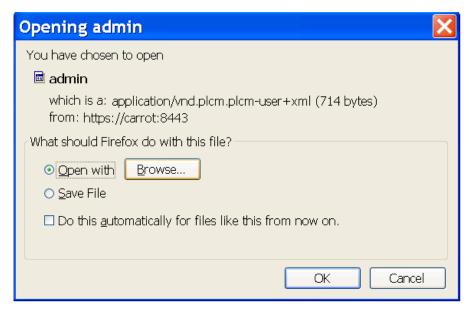
The browser will report a certificate trust issue. This is expected, since the server is configured by default to offer an unsigned certificate. Instruct the browser to ignore the issue.

The Authentication Required screen will be displayed. Authentication is required to access the resource.



Enter the **username** and **password** of an administrator user. This will be the same credentials used to login from the GUI.

The browser will ask you to identify what application to use to display the user resource:



Select **Browse** and choose to open the resource in a browser.

The browser displays the user resource.

Response Body:

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?> <ns4:plcm-user</pre>
xmlns="http://www.w3.org/2005/Atom" xmlns:ns2="urn:com:polycom:api:rest:plcm-user-role"
xmlns:ns3="urn:com:polycom:api:rest:plcm-user-role-list"
xmlns:ns4="urn:com:polycom:api:rest:plcm-user">
<link title="Self Relationship" type="application/vnd.plcm.plcm-user+xml" rel="self"</pre>
href="https://server:port/api/rest/users/LOCAL/admin"/>
<link title="Owned Conference Rooms" type="application/vnd.plcm.plcm-conference-room+xml"</pre>
rel="urn:com:polycom:api:rest:link-relations:owned-conference-rooms"
href="https://server:port/api/rest/conference-rooms?username=admin&domain=LOCAL"/>
  <ns3:plcm-user-role-list>
   <ns2:plcm-user-role>
     <ns2:name>Administrator</ns2:name>
    </ns2:plcm-user-role>
    <ns2:plcm-user-role>
     <ns2:name>Auditor</ns2:name>
    </ns2:plcm-user-role>
    <ns2:plcm-user-role>
     <ns2:name>Provisioner</ns2:name>
    </ns2:plcm-user-role>
  </ns3:plcm-user-role-list>
  <ns4:username>admin</ns4:username>
  <ns4:first-name>Default</ns4:first-name>
  <ns4:last-name>System Administrator User</ns4:last-name>
  <ns4:domain>LOCAL</ns4:domain>
  <ns4:disabled>false</ns4:disabled>
  <ns4:locked>false</ns4:locked>
  <ns4:entity-tag>260dc1ffa9ac8d1bafa2d2ba41115bd7</ns4:entity-tag>
</ns4:plcm-user>
```

Response Header:

```
Status Code: 200 OK
Cache-Control: no-cache
Content-Length: 1292
Content-Type: application/vnd.plcm.plcm-user+xml
Date: Fri, 18 May 2012 15:47:09 GMT
Etag: "260dclffa9ac8dlbafa2d2ba41115bd7"
Expires: Wed, 31 Dec 2015 17:00:00 MST
Pragma: No-cache
Server: false
X-Powered-By: Proximo
```

As we can see, the URL https://carrot:8443/api/rest/users/LOCAL/admin represents a plcm-user resource with a username of *admin*, a first-name of *Default*, a last-name of *System Administrator User*, etc.

You can perform the same HTTP GET request using the RestClient plugin for FireFox instead of a web browser. RestClient will let you specify the HTTP method, PUT/POST body, and header information that you cannot conveniently get from the browser.

You can also perform the same HTTP GET request from a Linux command line instead of a web browser using the following command line:

```
curl --silent --insecure --user admin:admin
https://carrot:8443/api/rest/users/LOCAL/admin | xmllint --format --
```

The curl command is a Linux command line program that will perform an HTTP GET.

- The --insecure option to curl tells it to skip certificate validation, similar to what we did in the browser.
- The --user option tells curl the username and password to use when authenticating with the server.
- xmllint is a Linux program that will pretty print XML.

POST Method

Similarly, curl can be used to create a user by sending an HTTP POST request with user data to the server. The echo command writes the user XML to standard output.

- The --data @- option tells curl to read the data output by the echo command.
- The --header option tells curl what Content-Type HTTP header to use. The Content-Type header is explained in the "Software Versioning Considerations" section.
- The --request POST option tells curl to perform an HTTP POST operation instead of an HTTP GET operation.
- The --include option tells curl to output the HTTP headers returned by the server.

Request Body:

```
echo '<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
  xmlns="urn:com:polycom:api:rest:plcm-user"
  xmlns:ns2="urn:com:polycom:api:rest:plcm-user-role"
  xmlns:ns3="urn:com:polycom:api:rest:plcm-user-role-list">
 <ns3:plcm-user-role-list>
   <ns2:plcm-user-role>
     <ns2:name>Administrator</ns2:name>
   </ns2:plcm-user-role>
   <ns2:plcm-user-role>
     <ns2:name>Auditor</ns2:name>
   </ns2:plcm-user-role>
  </ns3:plcm-user-role-list>
 <username>example</username>
 <first-name>Example</first-name>
 <last-name>User
 <domain>LOCAL</domain>
 <password>password</password>
 <disabled>false</disabled>
 <locked>false</locked>
</ple>
' | curl --data @- --user admin:admin --header "Content-Type: application/vnd.plcm.plcm-user+xml"
\--request POST --insecure --include https://carrot:8443/api/rest/users
```

Response Header:

Status Code: 201 Created
Content-Length: 0
Date: Fri, 18 May 2012 16:00:59 GMT
Etag: "7f2e3a433f13efc0dc91fcae435d4d03"
Location: https://server:port/api/rest/users/LOCAL/example
Server: false
X-Powered-By: Proximo

The response header returned by the server tells us that the URL for the newly created user resource is: https://carrot:8443/api/rest/users/LOCAL/example



Note

The following example is for the RealPresence DMA system and will not work on the RealPresence Resource Manager system.

DELETE Method

The user can also be deleted with an HTTP DELETE request.

URL: https://<server>:<port>/api/rest/users/LOCAL/user1

Response Header:

In these examples, we used a web browser and curl as HTTP clients because they are easily available and their operation can be described in a self-contained way.

Examples for other resources can be found in Chapter 3, "Examples,"



Note

The system only supports HTTPS SSL connections with BASIC authentication. The client must support this, or it will not work. The system does not support unencrypted HTTP.

The API is not platform specific, and any other HTTP client could have been used instead. Readers are encouraged to use the HTTP client best suited to their development environment. Nevertheless, it is frequently useful to have curl available as it is a very useful troubleshooting tool. Using curl and a text editor, a developer may invoke any API operation and see the result with a minimum of overhead.

Resource Descriptions

The API is organized into resources accessed by HTTP methods, and is formally described by a set of Web Application Description Language (WADL) and XML Schema (XSD) documents.



Note

See http://www.w3.org/Submission/wadl/ for the WADL specification.
See http://www.w3.org/XML/Schema for information about XSD.

The WADL resource documents provide the following information:

- the resources the API exposes (each WADL describes one resource)
- a list of referencing XSDs

- paths to available HTTP methods
- the path to a resource
- the HTTP methods that are available for each resource, their parameters and possible response codes

The XSD documents provide the following information:

• The schema of the XML document that defines the attributes of each resource

The WADL and XSD documents that describe the API are available in three different forms:

- The API development kit contains the complete set of these documents.
- The documents are available from each server at runtime, via special URLs.
- The API reference guide is composed of the WADL and XSD documents reformatted to make them
 more readable.



Note

The following example is for the RealPresence DMA system and will not work on the RealPresence Resource Manager system.

As an example we will request the WADL and XSD documents from the server for the user resource using the curl command:

```
curl --silent --insecure --user admin:admin
https://carrot:8443/api/rest/users?_wadl | xmllint --format --
```

Response Body:

```
<application xmlns="http://wadl.dev.java.net/2009/02"</pre>
xmlns:plcm-error="urn:com:polycom:api:rest:plcm-error"
xmlns:plcm-user="urn:com:polycom:api:rest:plcm-user"
xmlns:plcm-user-list="urn:com:polycom:api:rest:plcm-user-list"
xmlns:xs="http://www.w3.org/2001/XMLSchema"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="http://wadl.dev.java.net/2009/02
http://www.w3.org/Submission/wadl/wadl.xsd">
  <doc title="User" />
  <grammars>
  <include href="https://server:port/api/rest/users/xml.xsd" />
  <include href="https://server:port/api/rest/users/atom.xsd" />
   <include href="https://server:port/api/rest/users/plcm-error.xsd" />
   <include href="https://server:port/api/rest/users/plcm-user.xsd" />
  <include href="https://server:port/api/rest/users/plcm-user-list.xsd" />
  <include href="https://server:port/api/rest/users/plcm-user-role.xsd" />
  <include href="https://server:port/api/rest/users/plcm-user-role-list.xsd" />
  </grammars>
  <resources base="https://server:port/api/rest/users/">
   <resource id="com.polycom.api.rest.PlcmUserResource" path="/users">
      <method id="search" name="GET">
    </resource>
  </resources>
</application>
```

Once you have the WADL you can then request the user XSD document from the server with the command:

```
curl --silent --insecure --user admin:admin
https://carrot:8443/api/rest/users/plcm-user.xsd | xmllint --format --
```

The WADL can also be retrieved using RestClient. The benefit of using RestClient is you will be able to click to view the XSD instead of having to issue additional commands.

Readers are encouraged to familiarize themselves with the format of the WADL and XSD files and the RealPresence® Platform API Reference Guide. The most specific and detailed information about the API can be found in the Reference Guide.

In theory, both WADL and XSD are specific and formal enough that they can be used by automated tools to generate client code. In practice, there are many good tools for generating XML parsers from XSD files, but there are not yet good tools for generating client code from WADL.

Links and Navigation

A RESTful API requires the server to provide a mechanism for an API client to navigate from one resource to another through a relationship of links. The XML representation document for a resource will contain a set of one or more links to related resources.

These links are supplied in the entity body in the form of an Atom link. When a resource is created, a location header is supplied that contains the URL to the created resource. The links contain various attributes that can be set with values that are either standard or customized values.

The general format is the following:

```
<link title="<some title>" type="<media type>" rel="<relation type>"
href="<resource URL>"
```

The title attribute

This attribute will contain a short, but descriptive title for this link.

Example

title="Owned Conference Rooms"

The type Attribute

The *type* attribute will contain the media type value that corresponds to the target link. The media type will comply with the following format:

application

Indicates that the resource is associated with an application

• vnd.plcm

The "vnd" section indicates that the media type is "vendor" specific and the "plcm" section identifies this as a Polycom vendor.

resource name

The name such as "plcm-user"

subtype

Identifies the resource representation format such as XML, JSON, text, etc.

Example

type="application/vnd.plcm.plcm-conference-room+xml"

The rel Attribute

The *relation* type attribute provides context for the API client that will operate on the link. All API resources use custom relation types instead of the standard *related* value.

For example, a **User** resource can be an owner to one or more conference rooms.

Example

rel="urn:com:polycom:api:rest:link-relations:conference-room-owner"

The href Attribute

This attribute will contain the URL where the resource resides.

Example

href="https://<hostname>:8443/api/rest/conference-rooms?username=admin&domain=LOCAL"



Note

Information on Atom links can be found here: http://tools.ietf.org/html/rfc4287.

Link Example

For example, the **user** resource contains a self link and a link to the list of **conference rooms** that belong to the user:

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?> <ns4:plcm-user</pre>
xmlns="http://www.w3.org/2005/Atom" xmlns:ns2="urn:com:polycom:api:rest:plcm-user-role"
xmlns:ns3="urn:com:polycom:api:rest:plcm-user-role-list"
xmlns:ns4="urn:com:polycom:api:rest:plcm-user">
<link title="Self Relationship" type="application/vnd.plcm.plcm-user+xml" rel="self"</pre>
href="https://server:port/api/rest/users/LOCAL/admin"/>
<link title="Owned Conference Rooms" type="application/vnd.plcm.plcm-conference-room+xml"</pre>
rel="urn:com:polycom:api:rest:link-relations:owned-conference-rooms"
href="https://server:port/api/rest/conference-rooms?username=admin&domain=LOCAL"/>
  <ns3:plcm-user-role-list>
   <ns2:plcm-user-role>
     <ns2:name>Administrator</ns2:name>
   </ns2:plcm-user-role>
   <ns2:plcm-user-role>
     <ns2:name>Auditor</ns2:name>
    </ns2:plcm-user-role>
    <ns2:plcm-user-role>
     <ns2:name>Provisioner</ns2:name>
    </ns2:plcm-user-role>
  </ns3:plcm-user-role-list>
  <ns4:username>admin</ns4:username>
  <ns4:first-name>Default</ns4:first-name>
  <ns4:last-name>System Administrator User</ns4:last-name>
  <ns4:domain>LOCAL</ns4:domain>
  <ns4:disabled>false</ns4:disabled>
  <ns4:locked>false</ns4:locked>
  <ns4:entity-tag>260dc1ffa9ac8d1bafa2d2ba41115bd7</ns4:entity-tag>
</ns4:plcm-user>
```

The self link is the line:

```
<link title="Self Relationship" type="application/vnd.plcm.plcm-user+xml"
rel="self" href="https://<server>:<port>/api/rest/users/LOCAL/admin"/>
```

Another example is the **conference** resource, which will contain links to:

- the *conference room* hosting the conference
- the **MCU** hosting the conference
- the *user* that owns the conference
- the list of *participants* for the conference.

When a resource contains a related link to cross reference another resource, the link may resolve to a different server. This technique is used for a variety of virtualization purposes.

The following are some example scenarios:

- When the scheduler on a RealPresence Resource Manager starts a scheduled conference on a RealPresence DMA 7000 system, the link to the conference that it returns is a resource on the RealPresence DMA 7000 system, not the RealPresence Resource Manager system.
 - Subsequent conference control and monitoring API calls must be directed to the RealPresence DMA 7000 server.
- When the API is used to start a conference on a superclustered RealPresence DMA 7000 system, the conference is started on the server that owns the conference room, not the server where the API request was made.

The link to the **conference** resource returned points to the server used by the API client. For example, in a 2-cluster supercluster (cluster A and cluster B), we could have a conference running on cluster B. If the API client queries cluster A for the conference information, the links will point to cluster A even though it is actually running on cluster B.

Subsequent conference control and monitoring can be done from any server in a supercluster.



Note

Whenever possible, use the links returned by the API rather than building your own.

Custom Link Relationship Types

The API defines custom relationship types for all atom links to help facilitate programmatic parsing of links. The below tables are examples of RealPresence DMA system custom relationship types. Not all relationship types are included here.

RealPresence DMA Custom Relationship Types:

Conference Link Relationships

| Name | Title | Description |
|---|----------------------------|---|
| urn:com:polycom:api:rest:link-relations:h ost-conference-room | Hosting Conference Room | This is the specific Conference Room resource that is hosting this Conference resource. |
| urn:com:polycom:api:rest:link-relations:c onference-room-owner | Conference Room Owner | This Conference resource is hosted by the Conference Room resource stated above. As a result, the Conference Room is owned by the specific User resource. |
| urn:com:polycom:api:rest:link-relations:c onference-participants | Conference Participants | These are all the User resources that are participating in the Conference . |

Conference Room Link Relationships

| Name | Title | Description |
|---|--------------------------------|--|
| urn:com:polycom:api:rest:link-relations:c onference-room-owner | Conference Room Owner | This Conference Room resource is owned by the specific User resource. |
| urn:com:polycom:api:rest:link-relations:a pplied-conference-template | Applied Conference Template | This Conference Room resource will apply this Conference Template resource when it hosts a conference. |
| urn:com:polycom:api:rest:link-relations:c ontaining-mcu-pool-order | Containing MCU Pool Order | This Conference Room resource will use this MCU Pool Order resource to select MCUs when this room actively hosts a conference. |
| urn:com:polycom:api:rest:link-relations:s tart-conference-request | Start Conference Request | This Conference resource can start a conference that will be hosted by this Conference Room resource. |

MCU Link Relationships

| Name | Title | Description |
|---|------------------------|--|
| urn:com:polycom:api:rest:link-relations:containing-mcu-pool | Containing MCU Pool | An MCU resource is contained in zero or more MCU Pool resources. |

MCU Pool Link Relationships

| Name | Title | Description |
|--|------------------------------|---|
| urn:com:polycom:api:rest:link-relations:c ontaining-mcu-pool-order | Containing MCU Pool Order | This MCU Pool resource is contained in zero or more MCU Pool Order resources. |
| urn:com:polycom:api:rest:link-relations:c ontained-mcu | Contained MCU | This is an MCU resource contained in the MCU Pool resource. |

MCU Pool Order Link Relationships

| Name | Title | Description |
|--|--------------------|--|
| urn:com:polycom:api:rest:link-relations:contained-mcu-pool | Contained MCU Pool | This MCU Pool Order resource contains zero or more MCU Pool resources. |

User Link Relationships

| Name | Title | Description |
|--|---------------------------|---|
| urn:com:polycom:api:rest:link-relations:o wned-conference-rooms | Owned Conference Rooms | This User resource owns zero or more Conference Room resources. |

RealPresence Resource Manager Custom Relationship Types:

Device Link Relationships

| Name | Title | Description |
|--|-----------------|---|
| urn:com:polycom:api:rest:link-relations:device-owner | Device Owner | This Device resource is owned by a User resource. |
| urn:com:polycom:api:rest:link-relations:b elongs-to-area | Belongs to Area | This Device resource belongs to an Area resource. |

User Link Relationships

| Name | Title | Description |
|--|-----------------|--|
| urn:com:polycom:api:rest:link-relations:o wned-devices | Owned Devices | This User resource owns zero or more Endpoint resources. |
| urn:com:polycom:api:rest:link-relations: member-of-group | Member of Group | This User resource is a member of a Group resource. |
| urn:com:polycom:api:rest:link-relations:b elongs-to-area | Belongs to Area | This User resource belongs to an Area resource. |

Authentication and Authorization

Authentication is checked against the same set of *usernames* and *passwords* that allow GUI login access.

For a local user account, a domain does not need to be specified. If a domain is not specified, the system will assume **Local**. For an enterprise user account, the domain is required and **username** must be in the format of **domain**\username.

Each product in the RealPresence Platform uses a distinctive authentication realm for the API. Although it's not necessary to use this information, knowing this may be helpful to your client systems when interacting with multiple components of the platform. The RealPresence DMA system uses 'DMA 7000', while the RealPresence Resource Manager system uses 'XMA API'.

Authorization is performed by checking the roles associated with the user account. The roles required for each HTTP method of a given resource is documented in its WADL. API access is only allowed for authenticated users who are authorized to use the particular API method.

Auditing

All API access is audited.

The RealPresence DMA system can be configured to manage logging and history retention such as Call History, Conference History, and Conference Detail Records (CDRs) from the **Reports** menu. All API usage is tracked and the history will be retained in the system log files for future reference if necessary.

Audit Logs

RealPresence DMA System

All auditing events are logged in server.log. The archived logs can be downloaded at **Maintenance --> System Log Files**.

On the RealPresence DMA 7000, the audit logs can be obtained by downloading the archived logs, unzipping the log archive, and looking in the server.log file.

In the file, API audits (and audited actions from the GUI) will look like:

```
2011-11-29 20:13:52,122|SECURITY|http-0.0.0.0-8443-7:|command_audit_auth| auth debug UserID=[admin] SessionID=[0ec9c161-a8c2-4c67-bc07-b9217cb3c965] ClientIP=[111.222.111.222] UserAction=[getUser] Result=[SUCCESS] Parameters=[domain=LOCAL, userId=admin]
```

RealPresence Resource Manager System

All auditing events are logged in Jserver.log. The archived logs can be downloaded at **Reports > System Log Files**.

On the RealPresence Resource Manger system, the audit logs can be obtained by downloading the logs from the **System Log Files** and **Audit Log Files** pages, unzipping the archive, and searching the <code>JServer.log file</code>.

The log entries will look like:

JServer.log:

```
17/\text{Nov}/2011:17:13:50:796 -0700| INFO \\ | ajp-127.0.0.1-8009-1| CMALoginModule| (*******) API method GET attempted on /api/rest/groups
```

Error Handling

The API reports errors using HTTP status codes and sometimes by returning an XML document of type **plcm-error**.

Example: Attempting to get a conference that does not exist returns the following:

- a 404 'Not found' status code
- a **plcm-error** document:

Response Body:

Response Header:

Status Code: 404 Not Found Cache-Control: no-cache Content-Length: 216

Content-Type: application/vnd.plcm.plcm-error+xml

Date: Fri, 18 May 2012 17:30:03 GMT Expires: Wed, 31 Dec 2015 17:00:00 MST

Pragma: No-cache Server: false

X-Powered-By: Proximo

API servers that encounter an error include a **plcm-error** document in the response whenever possible, however, some requests may fail too early in their processing for a **plcm-error** to be generated.

The possible errors that each API method may encounter, and the status codes associated with them, may be found in the reference guide and the WADL documents.

In addition, the following table describes common status codes returned by the API.

| Status Code | Description |
|----------------------------|---|
| 200 OK | The request has succeeded. |
| 201 Created | The request has been fulfilled and a new resource has been created. |
| 204 No Content | The server has fulfilled the request but does not need to return an entity-body. |
| 304 Not Modified | The resource has not been modified on the server. |
| 400 Bad Request | The request document is not well formed, or is invalid according to its schema. |
| 401 Unauthorized | No login credentials are supplied, or the supplied credentials are invalid. |
| 403 Forbidden | The user's roles do not grant sufficient privileges to invoke the method. 403 may also be returned when the API license is not enabled. |
| 404 Not Found | The URL does not resolve to a valid resource. |
| 406 Not Acceptable | The response is not acceptable according to the accept headers sent in the request. |
| 409 Conflict | The request is valid, but the server is unable to fulfill it due to a problem with the current state of the resource. The user may be able to resolve the conflict and resubmit the request. |
| 412 Precondition Failed | The request contains an E-Tag header that does not match the current |
| | E-Tag of the resource. |
| 415 Unsupported Media Type | The client has sent a POST to the server with a content type that the server cannot consume. |

| Status Code | Description |
|---------------------------|---|
| 428 Precondition Required | The request does not contain an E-tag in the message body or in the header. |
| 500 Internal Server Error | An error occurred on the server that was not related to any problem with the request. Typically this status code will only be returned as a result of a server defect or misconfiguration. |

Software Versioning

The API has a robust set of features for handling issues of software versioning.

The API is forward compatible for existing methods and schemas. Clients using a new version of the API can connect to servers using an old version of the API if they don't require the new functionality provided by the new version of the API.

The API is backward compatible. Clients using an old version of the API can connect to servers using a new version of the API.

The API is intended to support the following use case:

A customer with multiple servers has written a client application to interact with these servers using the API.

- > The customer should be able to upgrade one or all of the servers without needing to modify their client application.
- The customer should be able to upgrade some of their servers, and modify their client application to take advantage of the new features in those upgraded servers, without upgrading all of their servers.

There are two kinds of API versioning:

- Transparent versioning maintains forward and backward compatibility.
- Discrete versioning does not maintain forward or backward compatibility.

Transparent Versioning

Typically, transparent versioning is used when a new optional attribute is added to a resource in a new version of the API. In this case any of the following scenarios may occur:

- When a client using an old version of the API sends a request to a server using the new version of the API, the client does not include the new attribute in the request. The attribute is optional, and the server can cope with its absence.
- When a client using an old version of the API receives a response from a server using the new version
 of the API, the response contains the new attribute. The client copes with the attribute that it does not
 understand by ignoring it.
- When a client using the new version of the API sends a request to a server using an old version of the API, the client includes the new attribute in the request. The server copes with the attribute that it does not understand by ignoring it.
- When a client using the new version of the API receives a response from a server using an old version
 of the API, the response does not contain the new attribute. The attribute is optional, and the client
 can cope with its absence.

Discrete Versioning

Discrete Versioning is used when new attributes are added that can not simply be ignored as optional, or when a resource has structural changes that can not simply be represented as new attributes.

The API uses the content type HTTP header to cope with incompatible differences. Each XML schema (including all versions of the schema with only compatible differences) is designated by a content type.

For example, the content type for the plcm-user resource is application/vnd.plcm.plcm-user+xml

The content type is specified in the XSD document specifying the schema, and every WADL file indicates the content types supported for each method of the resource. In the case that a new version of the API must introduce an incompatible difference, it will be introduced as a new schema with a new content type.

The API client may use HTTP headers to specify the content type that it sends in a request, and/or the content type that it accepts in a response. When the HTTP headers sent by the client include a 'Content-Type' header or an 'Accept' header, the server will respect the header, and use the schema version specified by the content type.

The following is an example of an HTTP GET request that accepts only the original version of **plcm-user**, and continues to use it for new versions of the API, even after incompatible differences have been introduced:

```
curl --silent --insecure --user admin:admin --header 'Accept:
application/vnd.plcm.plcm-user+xml'
https://carrot:8443/api/rest/users/LOCAL/admin | xmllint --format --
```

Polycom is committed to maintaining both forward and backward compatibility of the API. Where possible, the API will support both the old and new content types when incompatible differences occur.

API clients written to use an old version of the API may continue to do so, by specifying the old content type.

API clients written to use the new version of the API may do so by specifying the new content type.

In some cases, it may simply be impossible to support the old content type. In these cases, the release notes for the new version of the API will include a list of the content types that are no longer supported.

Best Practices to Prevent Versioning Issues

Developers using the API should use the following practices, to minimize software versioning related issues and protect against unintentional agent upgrades:

- Use an XML parser that respects extension points in the schema, and ignores attributes that it does not understand at these points.
- Include the 'Content-Type' HTTP header in every request that includes an XML document.
- Include the 'Accept' HTTP header in every request that expects an XML document in response. Failure to include an 'Accept' header may result in a random, incompatible version being sent in response.

To determine whether a version is compatible, refer to the documentation for the API methods, which specifies what representations are possible as returned values.

• As part of the upgrade process for Polycom products, check the release notes for content types that are no longer supported. If there are any, make sure that they are not used in the client application.

Subscriptions and Notifications

The subscription/notification mechanism allows API clients to register for and receive asynchronous HTTPS notifications about state changes.



Note

The subscriptions and notifications mechanisms are not available for the RealPresence Resource Manager system.

When discussing this mechanism:

- the consumer is the HTTPS server that the API users set up to receive notifications
- the **producer** is the Polycom product that publishes the notifications.

In order to receive notifications, you must:

1 prepare a HTTPS server for the producer to publish to. The producer will not publish notifications to plaintext HTTP connections.

Your web server must implement a specific interface, which is defined in the following WADLs that Polycom provides:

- plcm-conference-observer.wadl
 for consuming conference notifications
- plcm-participant-observer.wadl
 for consuming participant notifications
- 2 post a subscription to the URL of the resource to be observed.

The producer will post a notification to this web server every time the resource changes.

Notification responses will be treated as follows:

- ➤ If there is no response, the producer will wait 10 seconds for a response before discarding the notification and moving on.
- > If there is a response, the server will cache up to 500 response notifications on a first-in, first-out basis.

The set of sample code files that are provided with this API contain samples of conference and participant observers.

Examples of POST requests for **conference list**, **conference**, **participant list** and **participant** can be found in Examples

Authentication

The **username** and **password** in this section are the ones used to send notifications to the client. They are not the same credentials used for inbound API requests.

When creating a subscription, the user may provide a *username* and *password* in the request body. If provided, the producer will send these credentials over HTTPS BASIC authentication whenever it posts to the consumer. In addition, the producer is configured to offer its X.509 certificate when establishing an HTTPS connection. This allows MTLS, if desired by the consumer.

Initiating a subscription

There is a single subscription XML format, specified in **plcm-subscription.xsd**, which may be used to subscribe to:

- conference
- participant
- participant list

The API Client initiates subscription/notification by POSTng a **plcm-subscription** to the resource that it wishes to observe. The producer then returns a link to a resource that can be used for managing the subscription.

plcm-conference-list-subscription.xsd, is used to subscribe to conference lists.

Subscription management

The API Client can cancel the subscription by DELETEing the subscription resource.

The API Client can determine the status of the subscription by GETting the subscription resource.

Error reporting

If the producer is unable to publish a notification to the consumer, it will record the error in the **plcm-error** attribute of the **subscription**. This enables the consumer to troubleshoot the issue by reading the **subscription** resource.

Notification format

Each type of observable resource has a different notification format, and a different WADL that the consumer must implement. This enables the consumer to use standard tools to implement a web server with strong typing.

Typically, each notification contains a plcm-notification structure, which describes the notification event, and a content structure, containing a resource or a list of resources.



Note

Subscribing to asynchronous notifications does not guarantee a notification event order.

Subscription to lists

When subscribing to a list, the list notification will not send full lists. The first notification will be several ADD notifications. For example, for a conference list, one ADD notification will be sent for each of the currently ongoing conferences. Subsequent notifications will be ADD, DELETE, and UPDATE notifications.

Each notification will have a sequence number beginning at 1 and incrementing by 1 for each notification, This can be used to determine if a notification has been missed.

The consumer can request an update of the subscription. In this case, the sequence number will reset to 1 and they will receive an ADD notification. In the case of conference lists, the consumer will receive one ADD notification for each ongoing conference.



Note

The producer may send an UDPATE notification for a list at any time. Consumers should be prepared to receive an unsolicited UPDATE notification for a list resource. The client can choose not to receive UPDATE notifications via the **plcm-subscription** representation.

High Availability

The subscription/notification mechanism is intended to support a High Availability superclustered environment. Each subscription will be the responsibility of the cluster that received the subscription request. Clusters in a supercluster only know about subscriptions that they are managing and not those of other clusters.

Your subscription will be serviced the by cluster you posted it to. If that cluster goes down, the subscription will be lost.

Subscription renewal

When POSTing a subscription, the consumer may specify a time at which the subscription expires. This enables the producer to automatically clean up subscriptions to consumers that are no longer active. In this case, it is the responsibility of the consumer to periodically extend the subscription, if it is still active.



Note

The samples package contains two sample notification consumers: 'plcm-conference-observer' and 'plcm-participant-observer'

Learning From Sample Code

Another key learning tool is the set of sample code files that are provided with this API. The following sample applications are provided:

| Sample Name | Description |
|---------------------------|---|
| plcm-reservation | Application that creates a reservation on the Polycom server. This application implements the plcm-reservation.wadl interface. |
| plcm-get.pl | Platform independent HTTP GET client (Perl script) |
| plcm-post.pl | Platform independent HTTP POST client (Perl script) |
| plcm-delete.pl | Platform independent HTTP DELETE client (Perl script) |
| plcm-user-get.pl | Perl script that gets user data |
| plcm-user-create.pl | Perl script that creates a user |
| plcm-conference-observer | Java program that starts an HTTPS server to consume conference notifications |
| plcm-participant-observer | Java program that starts an HTTPS server to consume participant notifications |

API Services

The RealPresence® Platform API provides programmatic access to the Polycom RealPresence Resource Manager and RealPresence DMA 7000 products. This enables Polycom customers to customize their conferencing experience, and integrate their Polycom infrastructure products with their existing IT infrastructure.

The API includes support for provisioning, billing, resource reporting, and conference control and monitoring.

Provisioning Capabilities

The provisioning capabilities of the API allow application developers to provide for the ordinary changes in service caused by personnel turnover.

The provisioning API includes:

| Resource | Description |
|---------------------|---|
| user | People who use Video conferencing services, also administrators of the Polycom equipment |
| conference-room | Virtual meeting rooms that define the dial in numbers and conferencing experiences provided to each user |
| conference-template | A template specifying a class of conferencing experience, that can be shared between multiple conference rooms. |

Billing Capabilities

| Resource | Description | RealPres ence Resource Manager system | RealPres ence DMA system |
|---------------------|---|---|-----------------------------------|
| user | People who use Video conferencing services, also administrators of the Polycom equipment | Yes | Yes |
| user-role | Describes a user role in the system. | Yes | No |
| conference-room | Virtual meeting rooms that define the dial in numbers and conferencing experiences provided to each user | No | Yes |
| conference-template | A template specifying a class of conferencing experience, that can be shared between multiple conference rooms. | Yes | Yes ^a |

a. conference-template for theRealPresence DMA system is read only. The GET method is the only supported method.

The billing capabilities of the API allow application developers to obtain historical call and conference data, to allow billing based on usage.

The billing API includes:

| Resource | Description | RealPres ence Resource Manager system | RealPres ence DMA system |
|----------|---|---|-----------------------------------|
| billing | Historical call and conference records. | No | Yes |

| Resource | Description |
|----------|---|
| billing | Historical call and conference records. |

Conference Control and Monitoring (CCM) Capabilities

The conference control and monitoring (CCM) capabilities of the API allow application developers to observe and manipulate ongoing conferences.



Note

The Polycom RealPresence DMA system supports the use of Cisco Codian 4200, 4500, and MSE 8000 series MCUs as part of the Conference Manager's conferencing resource pool, but the following API operations will NOT be supported when using a Codian MCU in 5.01.

Set Conference Display Text:

https://<hostname>:8443/api/rest/conferences/{conference-ident
ifier}/set-display-text/{display-text}

Start/Stop Conference Recording

https://<hostname>:8443/api/rest/conferences/{conference-ident ifier}/start-recording

https://<hostname>:8443/api/rest/conferences/{conference-ident ifier}/stop-recording

The CCM API includes:

| Resource | Description | RealPres ence Resource Manager system | RealPres ence DMA system |
|--------------------------|---|---|-----------------------------------|
| conference | Conferences that are currently active. | Yes | Yes |
| participant ^a | Active calls that are participating in conferences. | Yes | Yes |

a. There is no participant WADL file. Participant related methods are described in the plcm-conference.wadl because participants cannot exist without a conference.

Conference Scheduling Capabilities

The conference scheduling capabilities of the API allow application developers to schedule future conferences on the Polycom RealPresence Resource Manager System.



Note

The scheduling API is only available through the RealPresence Resource Manager System. The RealPresence DMA System will return a 404 'Not Found" status code for any scheduling API calls.

The conference scheduling API includes:

| Resource | Description | RealPres ence Resource Manager system | RealPres ence DMA system |
|--------------------------|---|---|-----------------------------------|
| reservation | Reservation is used to create, update, read, delete, and search for a future conference reservation on the RealPresence DMA system. | Yes | No |
| participant-availability | Participant Availability is used to list the time blocks that a given conference participant is busy within a particular start-time and end-time. | Yes | No |

Resource Reporting Capabilities

The resource reporting capabilities of the API allow application developers to determine what conferencing resources are available, in order to schedule them.

The resource reporting API includes:

| Resource | Description | RealPres ence Resource Manager system | RealPres ence DMA system |
|----------------|--|---|-----------------------------------|
| mcu | An MCU available to the RealPresence DMA System. | No | Yes |
| mcu-pool | The pools of deployed MCUs that are available to host conferences. All MCUs are given equal priority when choosing an MCU to host a conference. This API currently only supports resource reporting, not configuration. | No | Yes |
| mcu-pool-order | Prioritized lists of MCU pools that are available to host conferences. An MCU will be chosen to host a conference from the highest priority pool that has sufficient capacity. This API currently only supports resource reporting, not configuration. | No | Yes |

Area Capabilities

The area capabilities of the API allow application developers to read the list of area (or tenant) objects from the system.

The area API includes:

| Resource | Description | RealPres ence Resource Manager system | RealPres ence DMA system |
|----------|--|---|-----------------------------------|
| area | Area is used to read the list of area (or tenant) objects from the system. | Yes | No |

Group Capabilities

The group capabilities of the API allow application developers to read the list of local groups from the system.

The group API includes:

| Resource | Description | RealPres ence Resource Manager system | RealPres ence DMA system |
|----------|---|---|-----------------------------------|
| group | Group is used to read the list of local groups from the system. | Yes | No |

Device Capabilities

The device capabilities of the API provides an interface to retrieve either a single device or all devices. The device API includes:

| Resource | Description | RealPres ence Resource Manager system | RealPres ence DMA system |
|----------|--|---|-----------------------------------|
| device | Device is used to search by a specific device ID or query a list of devices. | Yes | No |

Other Capabilities

| Resource | Description | RealPres ence Resource Manager system | RealPres ence DMA system |
|--------------|--|---|-----------------------------------|
| status | Gets a "shallow ping" of the system This should indicate that the system is up and running and that commands are being parsed by the API infrastructure. | No | Yes |
| subscription | A subscription to events happening on the Polycom server. | No | Yes |
| territory | A territory contains one or more sites for which a Polycom RealPresence DMA cluster is responsible. | No | Yes |

Examples

Resources

Each data object accessible through the API is modeled as a resource. Each resource is uniquely identified by a URL and is referenced by means of the URL path.

Billing Resource

Get CDRs

• HTTP Method: GET

URL: https://<server>:<port>/api/rest/billing



Note

The GET request returns a zipped file containing either all of the records available or all of the filtered records. This file is returned in the raw response body. Save and unzip this file to view it.

This varies from the standard return which provides the result of the operation in the response body.

Search CDRs

• HTTP Method: GET

• URL: https://<server>:<port>/api/rest/billing?from-date=2012-05-22



Note

If the request is sent from a FireFox browser, you will get a pop up window to open or save billing.zip that contains the CDRs.

Response Header:

Status Code: 200 OK Cache-Control: no-cache Content-Length: 1322

Content-Type: application/zip
Date: Tue, 22 May 2012 15:20:17 GMT

Etag: "1337700017447"

Expires: Wed, 31 Dec 2015 17:00:00 MST

Pragma: No-cache Server: false X-Powered-By: Proximo

Conference Resource

Get Conference List

HTTP Method: GET

• URL: https://<server>:<port>/api/rest/conferences

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<ns4:plcm-conference-list xmlns="htt//www.w3.org/2005/Atom"</pre>
xmlns:ns2="urn:com:polycom:api:rest:plcm-cascade-link"
xmlns:ns3="urn:com:polycom:api:rest:plcm-conference"
xmlns:ns4="urn:com:polycom:api:rest:plcm-conference-list">
  <plcm-conference>
    <link title="Self Relationship" type="application/vnd.plcm.plcm-conference+xml" rel="self"</pre>
href="https://server:port/api/rest/conferences/dma7000%3A5.0.0%3Adma1000"/>
    <link title="Hosting Conference Room" type="application/vnd.plcm.plcm-conference-room+xml"</pre>
rel="urn:com:polycom:api:rest:link-relations:host-conference-room"
href="https://server:port/api/rest/conference-rooms/1000"/>
    <link title="Conference Room Owner" type="application/vnd.plcm.plcm-user+xml"</pre>
rel="urn:com:polycom:api:rest:link-relations:conference-room-owner"
href="https://server:port/api/rest/users/LOCAL/admin"/>
   <link title="Conference Participants" type="application/vnd.plcm.plcm-participant-list+xml"</pre>
rel="urn:com:polycom:api:rest:link-relations:conference-participants"
href="https://server:port/api/rest/conferences/dma7000%3A5.0.0%3Adma1000/participants"/>
    <link title="Conference MCU" type="application/vnd.plcm.plcm-mcu+xml"</pre>
rel="urn:com:polycom:api:rest:link-relations:conference-mcu"
href="https://server:port/api/rest/mcus/62af2c76-24ae-4cad-be10-1ff1cbff3cfa"/>
    <conference-UUID>dma7000:5.0.0:dma1000</conference-UUID>
    <dial-in-number>1000</dial-in-number>
    <conference-room-identifier>1000</conference-room-identifier>
    <mcu-name>10.47.17.121</mcu-name>
    <cascade-mcu-name>10.47.17.121
    <owner-first-name>Default</owner-first-name>
    <owner-last-name>System Administrator User</owner-last-name>
    <host-name>hostname</host-name>
    <recording-active>false</recording-active>
    <entity-tag>c3745c77a6cc9dc34a86a452c16ea20c</entity-tag>
    <supported-layout>1 plus 2 bottom/supported-layout>
    <supported-layout>4 horizontal by 4 vertical/supported-layout>
    <supported-layout>1 plus 4 bottom/supported-layout>
    <supported-layout>1 plus 2 top</supported-layout>
    <supported-layout>2 top right by 2 bottom right flex</supported-layout>
    <supported-layout>1 plus 3 bottom and 2 right/supported-layout>
    <supported-layout>2 horizontal flex</supported-layout>
    <supported-layout>1 plus 4 bottom and 4 bottom</supported-layout>
    <supported-layout>2 horizontal wide</supported-layout>
    <supported-layout>2 horizontal by 2 vertical/supported-layout>
```

```
<supported-layout>1 plus 4 top</supported-layout>
   <supported-layout>3 horizontal by 3 vertical/supported-layout>
   <supported-layout>1 cell</supported-layout>
   <supported-layout>1 plus 2 bottom left flex</supported-layout>
   <supported-layout>2 horizontal/supported-layout>
   <supported-layout>1 plus 4 bottom and 3 right</supported-layout>
   <supported-layout>2 horizontal plus 4 top and 4 bottom/supported-layout>
   <supported-layout>2 top left by 2 bottom left flex</supported-layout>
   <supported-layout>1 plus 3 top</supported-layout>
   <supported-layout>2 horizontal plus 2 left top flex</supported-layout>
   <supported-layout>1 plus 2 top right flex</supported-layout>
   <supported-layout>1 center plus 4 top and 4 bottom and 2 right and 2 left</supported-layout>
   <supported-layout>1 cell qcif</supported-layout>
   <supported-layout>1 plus 3 right</supported-layout>
   <supported-layout>1 plus 2 right/supported-layout>
   <supported-layout>2 horizontal plus 2 right top flex</supported-layout>
   <supported-layout>2 vertical tall/supported-layout>
   <supported-layout>2 horizontal plus 2 right bottom flex/supported-layout>
   <supported-layout>1 plus 4 top and 4 bottom</supported-layout>
   <supported-layout>1 plus 4 right</supported-layout>
   <supported-layout>1 plus 2 bottom right flex</supported-layout>
   <supported-layout>1 plus 2 top left flex</supported-layout>
   <supported-layout>2 vertical</supported-layout>
   <supported-layout>1 plus 4 top and 4 top</supported-layout>
   <supported-layout>2 horizontal plus 2 left bottom flexflex
   <supported-layout>1 plus 3 bottom
   <current-layout>1 cell</current-layout>
   <conference-locked>false</conference-locked>
   <join-new-calls-muted>false</join-new-calls-muted>
   <start-time>2012-05-22T09:54:09.453-06:00</start-time>
 </ple>
</ns4:plcm-conference-list>
```

```
Status Code: 200 OK
Cache-Control: no-cache
Content-Length: 4856
Content-Type: application/vnd.plcm.plcm-conference-list+xml
Date: Tue, 22 May 2012 15:54:16 GMT
Etag: "c3745c77a6cc9dc34a86a452c16ea20c"
Expires: Wed, 31 Dec 2015 17:00:00 MST
Pragma: No-cache
Server: false
X-Powered-By: Proximo
```

Get Conference

• HTTP Method: GET

URL: https://<server>:<port>/api/rest/conferences/f97289f6-d3c6-4649-ac97-f86f2b0d9d0a

```
<?xml version="1.0" encoding="UTF-8" standalone="ves"?>
<plcm-conference xmlns="htt//www.w3.org/2005/Atom"</pre>
xmlns:ns2="urn:com:polycom:api:rest:plcm-cascade-link"
xmlns:ns3="urn:com:polycom:api:rest:plcm-conference">
  <link title="Self Relationship" type="application/vnd.plcm.plcm-conference+xml" rel="self"</pre>
href="https://server:port/api/rest/conferences/f97289f6-d3c6-4649-ac97-f86f2b0d9d0a/><link
title="Hosting Conference Room" type="application/vnd.plcm.plcm-conference-room+xml"
rel="urn:com:polycom:api:rest:link-relations:host-conference-room"
href="https://server:port/api/rest/conference-rooms/1000"/>
 <link title="Conference Room Owner" type="application/vnd.plcm.plcm-user+xml"</pre>
rel="urn:com:polycom:api:rest:link-relations:conference-room-owner"
href="https://server:port/api/rest/users/LOCAL/admin"/>
 <link title="Conference Participants" type="application/vnd.plcm.plcm-participant-list+xml"</pre>
rel="urn:com:polycom:api:rest:link-relations:conference-participants"
href="https://server:port/api/rest/conferences/f97289f6-d3c6-4649-ac97-f86f2b0d9d0a"/> <link
title="Conference MCU" type="application/vnd.plcm.plcm-mcu+xml"
rel="urn:com:polycom:api:rest:link-relations:conference-mcu"
href="https://server:port/api/rest/mcus/62af2c76-24ae-4cad-be10-1ff1cbff3cfa"/>
<conference-UUID>dma7000:5.0.0:dma1000</conference-UUID>
  <dial-in-number>1000</dial-in-number>
  <conference-room-identifier>1000</conference-room-identifier>
  <mcu-name>10.47.17.121</mcu-name>
  <cascade-mcu-name>10.47.17.121
  <owner-first-name>Default</owner-first-name>
  <owner-last-name>System Administrator User</owner-last-name>
  <host-name>hostname</host-name>
  <recording-active>false</recording-active>
  <entity-tag>c3745c77a6cc9dc34a86a452c16ea20c</entity-tag>
  <supported-layout>1 plus 2 bottom
  <supported-layout>4 horizontal by 4 vertical/supported-layout>
  <supported-layout>1 plus 4 bottom/supported-layout>
  <supported-layout>1 plus 2 top</supported-layout>
  <supported-layout>2 top right by 2 bottom right flex</supported-layout>
  <supported-layout>1 plus 3 bottom and 2 right/supported-layout>
  <supported-layout>2 horizontal flex</supported-layout>
  <supported-layout>1 plus 4 bottom and 4 bottom/supported-layout>
  <supported-layout>2 horizontal wide</supported-layout>
  <supported-layout>2 horizontal by 2 vertical/supported-layout>
  <supported-layout>1 plus 4 top</supported-layout>
```

```
<supported-layout>3 horizontal by 3 vertical</supported-layout>
 <supported-layout>1 cell</supported-layout>
 <supported-layout>1 plus 2 bottom left flex</supported-layout>
 <supported-layout>2 horizontal/supported-layout>
 <supported-layout>1 plus 4 bottom and 3 right/supported-layout>
 <supported-layout>2 horizontal plus 4 top and 4 bottom/supported-layout>
 <supported-layout>2 top left by 2 bottom left flex</supported-layout>
 <supported-layout>1 plus 3 top</supported-layout>
 <supported-layout>2 horizontal plus 2 left top flex</supported-layout>
 <supported-layout>1 plus 2 top right flex</supported-layout>
 <supported-layout>1 center plus 4 top and 4 bottom and 2 right and 2 left/supported-layout>
 <supported-layout>1 cell qcif</supported-layout>
 <supported-layout>1 plus 3 right</supported-layout>
 <supported-layout>1 plus 2 right/supported-layout>
 <supported-layout>2 horizontal plus 2 right top flex</supported-layout>
 <supported-layout>2 vertical tall/supported-layout>
 <supported-layout>2 horizontal plus 2 right bottom flex/supported-layout>
 <supported-layout>1 plus 4 top and 4 bottom
 <supported-layout>1 plus 4 right</supported-layout>
 <supported-layout>1 plus 2 bottom right flex</supported-layout>
 <supported-layout>1 plus 2 top left flex</supported-layout>
 <supported-layout>2 vertical</supported-layout>
 <supported-layout>1 plus 4 top and 4 top</supported-layout>
 <supported-layout>2 horizontal plus 2 left bottom flex</supported-layout>
 <supported-layout>1 plus 3 bottom
 <current-layout>1 cell/current-layout>
 <conference-locked>false</conference-locked>
 <join-new-calls-muted>false</join-new-calls-muted>
 <start-time>2012-05-22T09:54:09.453-06:00</start-time>
</plan-conference>
```

```
Status Code: 200 OK
Cache-Control: no-cache
Content-Length: 4745
Content-Type: application/vnd.plcm.plcm-conference+xml
Date: Tue, 22 May 2012 15:55:38 GMT
Etag: "c3745c77a6cc9dc34a86a452c16ea20c"
Expires: Wed, 31 Dec 2015 17:00:00 MST
Pragma: No-cache
Server: false
X-Powered-By: Proximo
```

Subscribe to Conference List

- HTTP Method: POST
- URL: https://<server>:<port>/api/rest/conferences
- Request Header: Content-Type: application/vnd.plcm.plcm-conference-list-subscription+xml

Request Body:

<cls:plcm-conference-list-subscription xmlns:sub="urn:com:polycom:api:rest:plcm-subscription"
xmlns:cls="urn:com:polycom:api:rest:plcm-conference-list-subscription"> <sub:plcm-subscription> <sub:consumer-url>https://observer-server:port/api/rest/notifications/conference</sub:consumer-url> <sub:time-to-live>3600</sub:time-to-live>

<sub:send-update-notifications>true</sub:send-update-notifications> </sub:plcm-subscription>
<cls:conference-room-identifier>1000</cls:conference-room-identifier></cls:plcm-conference-list-subscription>

Response Header:

Status Code: 201 Created
Content-Length: 0
Date: Fri, 18 May 2012 17:36:32 GMT
Location: https://server:port/api/rest/subscriptions/a8729252-4723-41b6-b0c7-0012eec24cc2
Server: false
X-Powered-By: Proximo

Subscribe to Conference

• HTTP Method: POST

URL:

https://<server>:<port>/api/rest/conferences/f97289f6-d3c6-4649-ac97-f86f 2b0d9d0a

Request Header: Content-Type: application/vnd.plcm.plcm-subscription+xml

Request Body:

<sub:plcm-subscription xmlns:sub="urn:com:polycom:api:rest:plcm-subscription">
<sub:consumer-url>https://observer-server:port/api/rest/notifications/conference</sub:consumer-url> <sub:time-to-live>3600</sub:time-to-live>
<sub:send-update-notifications>true</sub:send-update-notifications></sub:plcm-subscription>

Start Conference

● HTTP Method: POST

URL: https://<server>:<port>/api/rest/conferences/start-conference

• Request Header: Content-Type: application/vnd.plcm.plcm-conference-start-request+xml



Note

You can also use Content-Type: */*

Request Body:

```
<p:plcm-conference-start-request
xmlns:p="urn:com:polycom:api:rest:plcm-conference-start-request"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="urn:com:polycom:api:rest:plcm-conference-start-request
plcm-conference-start-request.xsd ">
<p:conference-start-request.xsd ">
<p:conference-room-identifier>1000</p:conference-room-identifier>
</p:plcm-conference-start-request>
```

Response Header:

Status Code: 201 Created Content-Length: 0

Date: Tue, 22 May 2012 16:07:16 GMT

Location: https://server:port/api/rest/conferences/dma7000%3A5.0.0%3Adma1000

Server: false

X-Powered-By: Proximo

End Conference

• HTTP Method: DELETE

URL:

https://<server>:<port>/api/rest/conferences/f97289f6-d3c6-4649-ac97-f86f 2b0d9d0a

Response Header:

Status Code: 204 No Content Cache-Control: no-cache

Date: Tue, 22 May 2012 16:21:36 GMT Expires: Wed, 31 Dec 2015 17:00:00 MST

Pragma: No-cache Server: false

X-Powered-By: Proximo

Set Conference Display Text

• HTTP Method: POST

URL:

https://<server>:<port>/api/rest/conferences/f97289f6-d3c6-4649-ac97-f86f 2b0d9d0a/set-display-text/new-text

Response Header:

Status Code: 204 No Content

Date: Tue, 22 May 2012 16:23:43 GMT

Server: false
X-Powered-By: Proximo

Set Conference Layout

● HTTP Method: POST

URL:

https://<server>:<port>/api/rest/conferences/f97289f6-d3c6-4649-ac97-f86f 2b0d9d0a/set-conference-layout/1%20plus%203%20bottom

Response Header:

Status Code: 204 No Content

Date: Tue, 22 May 2012 16:29:41 GMT

Error

Powered-By: Proximo

Lock Conference

• HTTP Method: POST

URL:

https://<server>:<port>/api/rest/conferences/f97289f6-d3c6-4649-ac97-f86f 2b0d9d0a/lock-conference

Response Header:

Status Code: 204 No Content

Date: Tue, 22 May 2012 16:29:41 GMT

Server: false
X-Powered-By: Proximo

Unlock Conference

• HTTP Method: POST

URL:

https://<server>:<port>/api/rest/conferences/f97289f6-d3c6-4649-ac97-f86f 2b0d9d0a/unlock-conference

Status Code: 204 No Content

Date: Tue, 22 May 2012 16:29:41 GMT

Server: false
X-Powered-By: Proximo

Start Recording

• HTTP Method: POST

URL:

https://<server>:<port>/api/rest/conferences/f97289f6-d3c6-4649-ac97-f86f 2b0d9d0a/start-recording

Response Header:

Status Code: 204 No Content

Date: Tue, 22 May 2012 16:29:41 GMT

Server: false
X-Powered-By: Proximo

Stop Recording

• HTTP Method: POST

URL:

https://<server>:<port>/api/rest/conferences/f97289f6-d3c6-4649-ac97-f86f2b0d9d0a/stop-recording

Response Header:

Status Code: 204 No Content

Date: Tue, 22 May 2012 16:29:41 GMT

Server: false X-Powered-By: Proximo

Mute All Participants Except

• HTTP Method: POST

URI ·

 Request Header: Content-Type: application/vnd.plcm.plcm-conference-start-request+xml



Note

You can also use Content-Type: */*

Request Body:

```
<mute:plcm-conference-mute-all-except-request
xmlns:mute="urn:com:polycom:api:rest:plcm-conference-mute-all-except-request">
<mute:excluded-participant-identifier>
<mute:excluded-participant-identifier>16be555b-7c7d-4a76-91e5-c3aa12a1d26e</mute:excluded-participant-identifier>
</mute:plcm-conference-mute-all-except-request></mute:plcm-conference-mute-all-except-request>
```

Response Header:

```
Status Code: 204 No Content
Date: Tue, 22 May 2012 16:29:41 GMT
Server: false
X-Powered-By: Proximo
```

Unmute All Participants

● HTTP Method: POST

URL:

https://<server>:<port>/api/rest/conferences/f97289f6-d3c6-4649-ac97-f86f 2b0d9d0a/unmute-all

Response Header:

```
Status Code: 204 No Content
Date: Tue, 22 May 2012 16:29:41 GMT
Server: false
X-Powered-By: Proximo
```

Set Join New Calls Muted

• HTTP Method: POST

URL:

https://<server>:<port>/api/rest/conferences/f97289f6-d3c6-4649-ac97-f86f 2b0d9d0a/ set-join-new-calls-muted/false

Response Header:

```
Status Code: 204 No Content
Date: Tue, 22 May 2012 16:29:41 GMT
Server: false
X-Powered-By: Proximo
```

Get Participant List

• HTTP Method: GET

URL:

https://<server>:<port>/api/rest/conferences/f97289f6-d3c6-4649-ac97-f86f 2b0d9d0a/ participants

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<plcm-participant-list xmlns="http://www.w3.org/2005/Atom"</pre>
xmlns:ns2="urn:com:polycom:api:rest:plcm-participant"
xmlns:ns3="urn:com:polycom:api:rest:plcm-participant-list">
  <ns2:plcm-participant>
    <link title="Participant MCU" type="application/vnd.plcm.plcm-mcu+xml"</pre>
rel="urn:com:polycom:api:rest:link-relations:participant-mcu"
href="https://server:port/api/rest/mcus/62af2c76-24ae-4cad-be10-1ff1cbff3cfa"/>
   <link title="Self Relationship" type="application/vnd.plcm.plcm-participant+xml" rel="self"</pre>
href="https://server:port/api/rest/conferences/f97289f6-d3c6-4649-ac97-f86f2b0d9d0a/participant
s/16be555b-7c7d-4a76-91e5-c3aa12a1d26e"/>
    <link title="Hosting Conference" type="application/vnd.plcm.plcm-conference+xml"</pre>
rel="urn:com:polycom:api:rest:link-relations:host-conference"
href="https://server:port/api/rest/conferences/f97289f6-d3c6-4649-ac97-f86f2b0d9d0a"/>
<ns2:participant-identifier>16be555b-7c7d-4a76-91e5-c3aa12a1d26e</ns2:participant-identifier>
<ns2:display-name>.m100@10.47.16.232.
<ns2:endpoint-identifier>9e6ae375-c4db-4b14-be62-e4b4b95942b4</ns2:endpoint-identifier>
    <ns2:endpoint-name>m100</ns2:endpoint-name>
    <ns2:endpoint-number>sip:m100@10.47.16.232/ns2:endpoint-number>
<ns2:conference-UUID>f97289f6-d3c6-4649-ac97-f86f2b0d9d0a</ns2:conference-UUID>
    <ns2:mcu-name>10.47.17.121</ns2:mcu-name>
    <ns2:connection-status>CONNECTED_DIAL_IN/ns2:connection-status>
    <ns2:chairperson>false</ns2:chairperson>
    <ns2:lecturer>false</ns2:lecturer>
    <ns2:audio-mute>false</ns2:audio-mute>
    <ns2:video-mute>false</ns2:video-mute>
    <ns2:signaling-protocol>SIP</ns2:signaling-protocol>
    <ns2:encrypted-media>false</ns2:encrypted-media>
<ns2:current-call-bitrate-kbps>368</ns2:current-call-bitrate-kbps>
    <ns2:current-layout>layout is controlled by conference/ns2:current-layout>
    <ns2:entity-tag>05f8325ed427b0cf828f534231b8cf65</ns2:entity-tag>
<ns2:connection-start-time>2012-05-22T11:14:52.695-06:00/ns2:connection-start-time>
  </ns2:plcm-participant>
</ple>
```

Response Header:

```
Status Code: 200 OK
Cache-Control: no-cache
Content-Length: 2162
Content-Type: application/vnd.plcm.plcm-participant-list+xml
Date: Tue, 22 May 2012 17:42:28 GMT
Etag: "05f8325ed427b0cf828f534231b8cf65"
Expires: Wed, 31 Dec 2015 17:00:00 MST
Pragma: No-cache
Server: false
X-Powered-By: Proximo
```

Get Participant

● HTTP Method: GET

URL:

https://<server>:<port>/api/rest/conferences/f97289f6-d3c6-4649-ac97-f86f 2b0d9d0a/participants/16be555b-7c7d-4a76-91e5-c3aa12a1d26e

Response Body:

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<ns2:plcm-participant xmlns="http://www.w3.org/2005/Atom"</pre>
xmlns:ns2="urn:com:polycom:api:rest:plcm-participant">
  <link title="Participant MCU" type="application/vnd.plcm.plcm-mcu+xml"</pre>
rel="urn:com:polycom:api:rest:link-relations:participant-mcu"
href="https://server:port/api/rest/mcus/62af2c76-24ae-4cad-be10-1ff1cbff3cfa"/>
  <link title="Self Relationship" type="application/vnd.plcm.plcm-participant+xml" rel="self"</pre>
href="https://server:port/api/rest/conferences/f97289f6-d3c6-4649-ac97-f86f2b0d9d0a/participant
s/16be555b-7c7d-4a76-91e5-c3aa12a1d26e"/>
  <link title="Hosting Conference" type="application/vnd.plcm.plcm-conference+xml"</pre>
rel="urn:com:polycom:api:rest:link-relations:host-conference"
href="https://server:port/api/rest/conferences/f97289f6-d3c6-4649-ac97-f86f2b0d9d0a"/>
  <ns2:participant-identifier>16be555b-7c7d-4a76-91e5-c3aa12a1d26e</ns2:participant-identifier>
  <ns2:display-name>.m100@10.47.16.232.</ns2:display-name>
  <ns2:endpoint-identifier>9e6ae375-c4db-4b14-be62-e4b4b95942b4</ns2:endpoint-identifier>
  <ns2:endpoint-name>m100</ns2:endpoint-name>
  <ns2:endpoint-number>sip:m100@10.47.16.232/ns2:endpoint-number>
  <ns2:conference-UUID>f97289f6-d3c6-4649-ac97-f86f2b0d9d0a/ns2:conference-UUID>
  <ns2:mcu-name>10.47.17.121</ns2:mcu-name>
  <ns2:connection-status>CONNECTED DIAL IN</ns2:connection-status>
  <ns2:chairperson>false</ns2:chairperson>
  <ns2:lecturer>false</ns2:lecturer>
  <ns2:audio-mute>false</ns2:audio-mute>
  <ns2:video-mute>false</ns2:video-mute>
  <ns2:signaling-protocol>SIP</ns2:signaling-protocol>
  <ns2:encrypted-media>false</ns2:encrypted-media>
  <ns2:current-call-bitrate-kbps>368</ns2:current-call-bitrate-kbps>
  <ns2:current-layout>layout is controlled by conference</ns2:current-layout>
  <ns2:entity-tag>05f8325ed427b0cf828f534231b8cf65</ns2:entity-tag>
  <ns2:connection-start-time>2012-05-22T11:14:52.695-06:00/ns2:connection-start-time>
</ns2:plcm-participant>
```

Response Header:

```
Status Code: 200 OK
Cache-Control: no-cache
Content-Length: 2048
Content-Type: application/vnd.plcm.plcm-participant+xml
Date: Tue, 22 May 2012 17:40:55 GMT
Etag: "05f8325ed427b0cf828f534231b8cf65"
Expires: Wed, 31 Dec 2015 17:00:00 MST
Pragma: No-cache
Server: false
X-Powered-By: Proximo
```

Subscribe to Participant List

- HTTP Method: POST
- URL:

https://<server>:<port>/api/rest/conferences/dma7000:5.0.0:dma1000/partic
ipants

• Request Header: Content-Type: application/vnd.plcm.plcm-subscription+xml



Note

You can also use Content-Type: */*

Request Body:

<sub:plcm-subscription xmlns:sub="urn:com:polycom:api:rest:plcm-subscription">
<sub:consumer-url>https://observer-server:port/api/rest/notifications/conference</sub:consumer-url> <sub:time-to-live>3600</sub:time-to-live>
<sub:send-update-notifications>true</sub:send-update-notifications>
</sub:plcm-subscription>

Subscribe to Participant

- HTTP Method: POST
- URL:

https://<server>:<port>/api/rest/conferences/dma7000:5.0.0-:dma1000/participants/11fdcf05-207e-4f74-94da-42890042f416

Request Header: Content-Type: application/vnd.plcm.plcm-subscription+xml



Note

You can also use Content-Type: */*

Request Body:

<sub:plcm-subscription xmlns:sub="urn:com:polycom:api:rest:plcm-subscription">
<sub:consumer-url>https://observer-server:port/api/rest/notifications/conference</sub:consumer-url> <sub:time-to-live>3600</sub:time-to-live>
<sub:send-update-notifications>true</sub:send-update-notifications>
</sub:plcm-subscription>

Mute Participant Audio

- HTTP Method: POST
- URL:

https://<server>:<port>/api/rest/conferences/f97289f6-d3c6-4649-ac97-f86f 2b0d9d0a/participants/16be555b-7c7d-4a76-91e5-c3aa12a1d26e/mute-audio

Status Code: 204 No Content
Date: Tue, 22 May 2012 17:47:11 GMT
Server: false

X-Powered-By: Proximo

Unmute Participant Audio

• HTTP Method: POST

URL:

https://<server>:<port>/api/rest/conferences/f97289f6-d3c6-4649-ac97-f86f 2b0d9d0a/participants/16be555b-7c7d-4a76-91e5-c3aa12a1d26e/unmute-audio

Response Header:

Status Code: 204 No Content
Date: Tue, 22 May 2012 17:47:11 GMT
Server: false

X-Powered-By: Proximo

Suspend Participant Video

• HTTP Method: POST

URL:

https://<server>:<port>/api/rest/conferences/f97289f6-d3c6-4649-ac97-f86f2b0d9d0a/participants/16be555b-7c7d-4a76-91e5-c3aa12a1d26e/suspend-video

Response Header:

Status Code: 204 No Content Date: Tue, 22 May 2012 17:47:11 GMT Server: false

X-Powered-By: Proximo

Resume Participant Video

• HTTP Method: POST

URI ·

https://<server>:<port>/api/rest/conferences/f97289f6-d3c6-4649-ac97-f86f 2b0d9d0a/participants/16be555b-7c7d-4a76-91e5-c3aa12a1d26e/resume-video

Response Header:

Status Code: 204 No Content Date: Tue, 22 May 2012 17:47:11 GMT Server: false

X-Powered-By: Proximo

Disconnect Participant

• HTTP Method: POST

URL:

https://<server>:<port>/api/rest/conferences/f97289f6-d3c6-4649-ac97-f86f 2b0d9d0a/participants/16be555b-7c7d-4a76-91e5-c3aa12a1d26e/disconnect

Response Header:

Status Code: 204 No Content

Date: Tue, 22 May 2012 17:47:11 GMT

Server: false
X-Powered-By: Proximo

Set Participant Display Name

● HTTP Method: POST

URL:

https://<server>:<port>/api/rest/conferences/f97289f6-d3c6-4649-ac97-f86f 2b0d9d0a/participants/16be555b-7c7d-4a76-91e5-c3aa12a1d26e/set-display-na me/new-display-name

Response Header:

Status Code: 204 No Content

Date: Tue, 22 May 2012 17:47:11 GMT

Server: false
X-Powered-By: Proximo

Conference Room Resource

Get Conference Room List

● HTTP Method: GET

• URL: https://<server>:<port>/api/rest/conference-rooms

Search Conference Rooms

• HTTP Method: GET

URL: https://<server>:<port>/api/rest/conference-rooms?passthru=*

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<ns4:plcm-conference-room-list xmlns="http://www.w3.org/2005/Atom"</pre>
xmlns:ns2="urn:com:polycom:api:rest:plcm-dial-out-participant"
xmlns:ns3="urn:com:polycom:api:rest:plcm-conference-room"
xmlns:ns4="urn:com:polycom:api:rest:plcm-conference-room-list">
  <plcm-conference-room>
    <link title="Self Relationship" type="application/vnd.plcm.plcm-conference-room+xml"</pre>
rel="self" href="https://server:port/api/rest/conference-rooms/1000"/>
    <link title="Conference Room Owner" type="application/vnd.plcm.plcm-user+xml"</pre>
rel="urn:com:polycom:api:rest:link-relations:conference-room-owner"
href="https://server:port/api/rest/users/LOCAL/admin"/>
    <link title="Applied Conference Template"</pre>
type="application/vnd.plcm.plcm-conference-template+xml"
rel="urn:com:polycom:api:rest:link-relations:applied-conference-template"
href="https://server:port/api/rest/conference-templates/1"/>
    <link title="Containing MCU Pool Order" type="application/vnd.plcm.plcm-mcu-pool-order+xml"</pre>
rel="urn:com:polycom:api:rest:link-relations:containing-mcu-pool-order"
href="https://server:port/api/rest/mcu-pool-orders/0"/>
    <link title="Start Conference Request"</pre>
type="application/vnd.plcm.plcm-conference-start-request+xml"
rel="urn:com:polycom:api:rest:link-relations:start-conference-request"
href="https://server:port/api/rest/conferences/start-conference"/>
    <owner-first-name>Default</owner-first-name>
    <owner-last-name>System Administrator User</owner-last-name>
    <owner-domain>LOCAL</owner-domain>
    <owner-username>admin</owner-username>
    <duration-in-minutes>-1</duration-in-minutes>
    <conference-room-identifier>1000</conference-room-identifier>
    <dial-in-number>1000</dial-in-number>
    <conference-template-name>Factory Template/conference-template-name>
    <max-participants>-1</max-participants>
    <mcu-pool-order-name>Factory Pool Order</mcu-pool-order-name>
    <territory-name>Default DMA Territory</territory-name>
    <chairperson-required>false</chairperson-required>
    <entity-taq>9682c7ffadd6c6da4e6cd90c03c5a494</entity-taq>
    <auto-dial-out>false</auto-dial-out>
  </plan-conference-room>
</ns4:plcm-conference-room-list>
```

Response Header:

```
Status Code: 200 OK
Cache-Control: no-cache
Content-Length: 2426
Content-Type: application/vnd.plcm.plcm-conference-room-list+xml
Date: Tue, 22 May 2012 19:55:06 GMT
Etag: "9682c7ffadd6c6da4e6cd90c03c5a494"
Expires: Wed, 31 Dec 2015 17:00:00 MST
Pragma: No-cache
Server: false
X-Powered-By: Proximo
```

Get Conference Room

- HTTP Method: GET
- URL: https://<server>:<port>/api/rest/conference-rooms/1000

Response Body:

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<plcm-conference-room xmlns="http://www.w3.org/2005/Atom"</pre>
xmlns:ns2="urn:com:polycom:api:rest:plcm-dial-out-participant"
xmlns:ns3="urn:com:polycom:api:rest:plcm-conference-room">
 <link title="Self Relationship" type="application/vnd.plcm.plcm-conference-room+xml"</pre>
rel="self" href="https://server:port/api/rest/conference-rooms/1000"/>
 <link title="Conference Room Owner" type="application/vnd.plcm.plcm-user+xml"</pre>
rel="urn:com:polycom:api:rest:link-relations:conference-room-owner"
href="https://server:port/api/rest/users/LOCAL/admin"/>
 <link title="Applied Conference Template"</pre>
type="application/vnd.plcm.plcm-conference-template+xml"
rel="urn:com:polycom:api:rest:link-relations:applied-conference-template"
href="https://server:port/api/rest/conference-templates/1"/>
 <link title="Containing MCU Pool Order" type="application/vnd.plcm.plcm-mcu-pool-order+xml"</pre>
rel="urn:com:polycom:api:rest:link-relations:containing-mcu-pool-order"
href="https://server:port/api/rest/mcu-pool-orders/0"/>
 <link title="Start Conference Request"</pre>
type="application/vnd.plcm.plcm-conference-start-request+xml"
rel="urn:com:polycom:api:rest:link-relations:start-conference-request"
href="https://server:port/api/rest/conferences/start-conference"/>
  <owner-first-name>Default</owner-first-name>
  <owner-last-name>System Administrator User</owner-last-name>
  <owner-domain>LOCAL</owner-domain>
  <owner-username>admin</owner-username>
  <duration-in-minutes>-1</duration-in-minutes>
  <conference-room-identifier>1000</conference-room-identifier>
  <dial-in-number>1000</dial-in-number>
  <conference-template-name>Factory Template/conference-template-name>
  <max-participants>-1</max-participants>
  <mcu-pool-order-name>Factory Pool Order</mcu-pool-order-name>
  <territory-name>Default DMA Territory </territory-name>
  <chairperson-required>false</chairperson-required>
  <entity-tag>9682c7ffadd6c6da4e6cd90c03c5a494/entity-tag>
  <auto-dial-out>false</auto-dial-out>
</ple>
```

```
Status Code: 200 OK
Cache-Control: no-cache
Content-Length: 2300
Content-Type: application/vnd.plcm.plcm-conference-room+xml
Date: Tue, 22 May 2012 19:58:07 GMT
Etag: "9682c7ffadd6c6da4e6cd90c03c5a494"
Expires: Wed, 31 Dec 2015 17:00:00 MST
Pragma: No-cache
Server: false
X-Powered-By: Proximo
```

Create Conference Room

• HTTP Method: POST

- URL: https://<server>:<port>/api/rest/conference-rooms
- Request Header: Content-Type: application/vnd.plcm.plcm-conference-room+xml



Note

You can also use Content-Type: */*

Request Body:

```
<plcm-conference-room xmlns="urn:com:polycom:api:rest:plcm-conference-room">
<owner-domain>local</owner-domain>
<owner-username>admin</owner-username>
<room-id>1001</room-id>
<dial-in-number>1001</dial-in-number>
<mcu-pool-order-name>Factory Pool Order</mcu-pool-order-name>
</plcm-conference-room>
```

Response Header:

```
Status Code: 201 Created
Content-Length: 0
Date: Tue, 22 May 2012 20:10:21 GMT
Etag: "865f5b9c9682cc18aa79ff60f16d67f3"
Location: https://<server>:<port>/api/rest/conference-rooms/1001
Server: false
X-Powered-By: Proximo
```

Update Conference Room

- HTTP Method: PUI
- URL: https://<server>:<port>/api/rest/conference-rooms/1000
- Request Header: Content-Type: application/vnd.plcm.plcm-conference-room+xml



Note

You can also use Content-Type: */*

Request Body:

Response Header:

```
Status Code: 204 No Content
Cache-Control: no-cache
Date: Tue, 22 May 2012 20:49:46 GMT
Etag: "16a2f335ebfe4f03df26accb922cb359"
Expires: Wed, 31 Dec 2015 17:00:00 MST
Location: https://server:port/api/rest/conference-rooms/1000
Pragma: No-cache
Server: false
X-Powered-By: Proximo
```

Delete Conference Room

• HTTP Method: DELETE

• URL: https://<server>:<port>/api/rest/conference-rooms/1000

Response Header:

```
Status Code: 204 No Content
Cache-Control: no-cache
Date: Tue, 22 May 2012 20:52:29 GMT
Expires: Wed, 31 Dec 2015 17:00:00 MST
Pragma: No-cache
Server: false
X-Powered-By: Proximo
```

Conference Template Resource

Get Conference Template List

- HTTP Method: GET
- URL: https://<server>:<port>/api/rest/conference-templates

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<ns5:plcm-conference-template-list xmlns="http://www.w3.org/2005/Atom"</pre>
xmlns:ns2="urn:com:polycom:api:rest:plcm-simulcast-stream"
xmlns:ns3="urn:com:polycom:api:rest:plcm-line-rate"
xmlns:ns4="urn:com:polycom:api:rest:plcm-conference-template"
xmlns:ns5="urn:com:polycom:api:rest:plcm-conference-template-list">
  <ns4:plcm-conference-template>
    <link title="Self Relationship" type="application/vnd.plcm.plcm-conference-template+xml"</pre>
rel="self" href="https://server:port/api/rest/conference-templates/1"/>
   <ns2:plcm-simulcast-stream>
      <ns2:video-profile-type>BASE PROFILE</ns2:video-profile-type>
      <ns2:simulcast-resolution>R 180p</ns2:simulcast-resolution>
      <ns2:line-rate-mrm>LR 128</ns2:line-rate-mrm>
      <ns2:frame-rate>7</ns2:frame-rate>
      <ns2:frame-rate>15</ns2:frame-rate>
      <ns2:frame-rate>30</ns2:frame-rate>
    </ns2:plcm-simulcast-stream>
    <ns2:plcm-simulcast-stream>
      <ns2:video-profile-type>HIGH PROFILE</ns2:video-profile-type>
      <ns2:simulcast-resolution>R 360p</ns2:simulcast-resolution>
      <ns2:line-rate-mrm>LR 256</ns2:line-rate-mrm>
      <ns2:frame-rate>7</ns2:frame-rate>
      <ns2:frame-rate>15</ns2:frame-rate>
      <ns2:frame-rate>30</ns2:frame-rate>
    </ns2:plcm-simulcast-stream>
    <ns2:plcm-simulcast-stream>
      <ns2:video-profile-type>HIGH PROFILE</ns2:video-profile-type>
      <ns2:simulcast-resolution>R 720p</ns2:simulcast-resolution>
      <ns2:line-rate-mrm>LR 512</ns2:line-rate-mrm>
      <ns2:frame-rate>7</ns2:frame-rate>
      <ns2:frame-rate>15</ns2:frame-rate>
      <ns2:frame-rate>30</ns2:frame-rate>
    </ns2:plcm-simulcast-stream>
    <ns3:plcm-line-rate> <ns3:line-rate>LR 384</ns3:line-rate>
    </ns3:plcm-line-rate>
    <ns4:conference-template-identifier>1</ns4:conference-template-i dentifier>
    <ns4:name>Factory Template</ns4:name>
    <ns4:description>Factory Template</ns4:description>
    <ns4:priority>1</ns4:priority> <ns4:use-profile>false</ns4:use-profile>
    <ns4:encryption>false</ns4:encryption>
    <ns4:lost-packet-recovery>true</ns4:lost-packet-recovery>
    <ns4:h239-settings>GRAPHICS</ns4:h239-settings>
    <ns4:h239-protocol>UP TO H264</ns4:h239-protocol>
<ns4:high-definition-video-switching>false</ns4:high-definition-video-switching>
    <ns4:high-profile-vsw>false</ns4:high-profile-vsw>
    <ns4:hd-resolution>HD 720</ns4:hd-resolution>
    <ns4:video-quality>SHARPNESS</ns4:video-quality>
    <ns4:participants-join-type>UNMUTE</ns4:participants-join-type>
```

```
<ns4:telepresence-mode>AUTO</ns4:telepresence-mode>
   <ns4:telepresence-layout-mode>CP</ns4:telepresence-layout-mode>
   <ns4:presentation-mode>false</ns4:presentation-mode>
   <ns4:lecturer-view-switching>false/ns4:lecturer-view-switching>
   <ns4:same-layout>false</ns4:same-layout>
   <ns4:auto-layout>true</ns4:auto-layout>
   <ns4:layout>L1x1</ns4:layout>
<ns4:skin>SAPPHIRE JEWEL</ns4:skin>
<ns4:conference-requires-chairperson>false</ns4:conference-requires-chairperson>
   <ns4:video-clarity>false/ns4:video-clarity>
   <ns4:audio-clarity>true</ns4:audio-clarity>
    <ns4:use-cascading>false</ns4:use-cascading>
    <ns4:echo-suppression>true</ns4:echo-suppression>
   <ns4:keyboard-suppression>false/ns4:keyboard-suppression>
<ns4:send-content-to-legacy-endpoints>true</ns4:send-content-to-legacy-endpoints>
   <ns4:recording-type>DISABLED</ns4:recording-type>
   <ns4:audio-only-recording>false</ns4:audio-only-recording>
<ns4:enable-recording-indication>false</ns4:enable-recording-indication>
<ns4:floor-and-chair-control>FLOOR ONLY</ns4:floor-and-chair-control>
   <ns4:layout-control>ENABLED</ns4:layout-control>
   <ns4:content-channel-video>ENABLED</ns4:content-channel-video>
<ns4:codian-custom-layout-allowed>DISABLED</ns4:codian-custom-layout-allowed>
   <ns4:codian-layout>LAYOUT08</ns4:codian-layout>
    <ns4:codian-lecture-mode>DISABLED</ns4:codian-lecture-mode>
    <ns4:codian-mute-dtmf>NEVER</ns4:codian-mute-dtmf>
<ns4:codian-transmitted-content-resolution>STD SCREEN ONLY</ns4:codian-transmitted-content-reso</pre>
<ns4:codian-allow-mute-audio>ENABLED</ns4:codian-allow-mute-audio>
   <ns4:resolution-limit>AUTO</ns4:resolution-limit>
   <ns4:auto-brightness>false</ns4:auto-brightness>
   <ns4:enable-gathering>false</ns4:enable-gathering>
   <ns4:gathering-language>ENGLISH</ns4:gathering-language>
   <ns4:tip-compatibility>NONE</ns4:tip-compatibility>
   <ns4:encryption-policy>UNENCRYPTED ONLY</ns4:encryption-policy>
   <ns4:entity-tag>69fe892a76af737fc2c9fdfa67bcc926</ns4:entity-tag>
 </ns4:plcm-conference-template>
</ns5:plcm-conference-template-list>
```

```
Status Code: 200 OK
Cache-Control: no-cache
Content-Length: 4331
Content-Type: application/vnd.plcm.plcm-conference-template-list+xml
Date: Tue, 22 May 2012 20:54:48 GMT
Etag: "69fe892a76af737fc2c9fdfa67bcc926"
Expires: Wed, 31 Dec 2015 17:00:00 MST
Pragma: No-cache
Server: false
X-Powered-By: Proximo
```

Get Conference Template

- HTTP Method: GET
- URL: https://<server>:<port>/api/rest/conference-templates/1?type=identifier
- https://<server>:<port>/api/rest/conference-templates/Factory%20Template?t ype=name

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<ns4:plcm-conference-template xmlns="http://www.w3.org/2005/Atom"</pre>
xmlns:ns2="urn:com:polycom:api:rest:plcm-simulcast-stream"
xmlns:ns3="urn:com:polycom:api:rest:plcm-line-rate"
xmlns:ns4="urn:com:polycom:api:rest:plcm-conference-template">
  <link title="Self Relationship" type="application/vnd.plcm.plcm-conference-template+xml"</pre>
rel="self" href="https://server:port/api/rest/conference-templates/1"/>
  <ns2:plcm-simulcast-stream>
    <ns2:video-profile-type>BASE PROFILE</ns2:video-profile-type>
    <ns2:simulcast-resolution>R 180p</ns2:simulcast-resolution>
    <ns2:line-rate-mrm>LR 128</ns2:line-rate-mrm>
    <ns2:frame-rate>7</ns2:frame-rate>
    <ns2:frame-rate>15</ns2:frame-rate>
    <ns2:frame-rate>30</ns2:frame-rate>
  </ns2:plcm-simulcast-stream>
  <ns2:plcm-simulcast-stream>
    <ns2:video-profile-type>HIGH PROFILE</ns2:video-profile-type>
    <ns2:simulcast-resolution>R 360p</ns2:simulcast-resolution>
    <ns2:line-rate-mrm>LR 256</ns2:line-rate-mrm>
    <ns2:frame-rate>7</ns2:frame-rate>
    <ns2:frame-rate>15</ns2:frame-rate>
    <ns2:frame-rate>30</ns2:frame-rate>
  </ns2:plcm-simulcast-stream>
  <ns2:plcm-simulcast-stream>
    <ns2:video-profile-type>HIGH PROFILE</ns2:video-profile-type>
    <ns2:simulcast-resolution>R 720p</ns2:simulcast-resolution>
    <ns2:line-rate-mrm>LR 512</ns2:line-rate-mrm>
    <ns2:frame-rate>7</ns2:frame-rate>
    <ns2:frame-rate>15</ns2:frame-rate>
    <ns2:frame-rate>30</ns2:frame-rate>
  </ns2:plcm-simulcast-stream>
  <ns3:plcm-line-rate>
    <ns3:line-rate>LR 384</ns3:line-rate>
  </ns3:plcm-line-rate>
  <ns4:conference-template-identifier>1</ns4:conference-template-identifier>
  <ns4:name>Factory Template</ns4:name>
  <ns4:description>Factory Template/ns4:description>
  <ns4:priority>1</ns4:priority>
  <ns4:use-profile>false</ns4:use-profile>
  <ns4:encryption>false</ns4:encryption>
  <ns4:lost-packet-recovery>true</ns4:lost-packet-recovery>
  <ns4:h239-settings>GRAPHICS</ns4:h239-settings>
  <ns4:h239-protocol>UP TO H264</ns4:h239-protocol>
  <ns4:high-definition-video-switching>false</ns4:high-definition-video-switching>
  <ns4:high-profile-vsw>false</ns4:high-profile-vsw>
  <ns4:hd-resolution>HD 720</ns4:hd-resolution>
```

```
<ns4:video-quality>SHARPNESS</ns4:video-quality>
  <ns4:participants-join-type>UNMUTE</ns4:participants-join-type>
  <ns4:telepresence-mode>AUTO</ns4:telepresence-mode>
  <ns4:telepresence-layout-mode>CP</ns4:telepresence-layout-mode>
  <ns4:presentation-mode>false</ns4:presentation-mode>
  <ns4:lecturer-view-switching>false</ns4:lecturer-view-switching>
  <ns4:same-layout>false</ns4:same-layout>
  <ns4:auto-layout>true</ns4:auto-layout>
  <ns4:layout>L1x1</ns4:layout>
  <ns4:skin>SAPPHIRE JEWEL</ns4:skin>
  <ns4:conference-requires-chairperson>false</ns4:conference-requires-chairperson>
  <ns4:video-clarity>false</ns4:video-clarity>
  <ns4:audio-clarity>true</ns4:audio-clarity>
  <ns4:use-cascading>false</ns4:use-cascading>
  <ns4:echo-suppression>true</ns4:echo-suppression>
  <ns4:keyboard-suppression>false</ns4:keyboard-suppression>
  <ns4:send-content-to-legacy-endpoints>true</ns4:send-content-to-legacy-endpoints>
  <ns4:recording-type>DISABLED</ns4:recording-type>
  <ns4:audio-only-recording>false</ns4:audio-only-recording>
  <ns4:enable-recording-indication>false/ns4:enable-recording-indication>
  <ns4:floor-and-chair-control>FLOOR ONLY</ns4:floor-and-chair-control>
  <ns4:layout-control>ENABLED</ns4:layout-control>
  <ns4:content-channel-video>ENABLED</ns4:content-channel-video>
  <ns4:codian-custom-layout-allowed>DISABLED</ns4:codian-custom-layout-allowed>
  <ns4:codian-layout>LAYOUT08</ns4:codian-layout>
  <ns4:codian-lecture-mode>DISABLED</ns4:codian-lecture-mode>
  <ns4:codian-mute-dtmf>NEVER</ns4:codian-mute-dtmf>
<ns4:codian-transmitted-content-resolution>STD SCREEN ONLY</ns4:codian-transmitted-content-reso</pre>
lution>
  <ns4:codian-allow-mute-audio>ENABLED</ns4:codian-allow-mute-audio>
  <ns4:resolution-limit>AUTO</ns4:resolution-limit>
  <ns4:auto-brightness>false</ns4:auto-brightness>
  <ns4:enable-gathering>false</ns4:enable-gathering>
  <ns4:gathering-language>ENGLISH</ns4:gathering-language>
  <ns4:tip-compatibility>NONE</ns4:tip-compatibility>
  <ns4:encryption-policy>UNENCRYPTED ONLY</ns4:encryption-policy>
  <ns4:entity-tag>69fe892a76af737fc2c9fdfa67bcc926</ns4:entity-tag>
</ns4:plcm-conference-template>
```

```
Status Code: 200 OK
Cache-Control: no-cache
Content-Length: 4193
Content-Type: application/vnd.plcm.plcm-conference-template+xml
Date: Tue, 22 May 2012 21:03:54 GMT
Etag: "69fe892a76af737fc2c9fdfa67bcc926"
Expires: Wed, 31 Dec 2015 17:00:00 MST
Pragma: No-cache
Server: false
X-Powered-By: Proximo
```

MCU Resource

Get MCU List

- HTTP Method: GET
- URL: https://<server>:<port>/api/rest/mcus

Response Body:

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<ns4:plcm-mcu-list xmlns="urn:com:polycom:api:rest:plcm-mcu-capacity"</pre>
xmlns:ns2="http://www.w3.org/2005/Atom" xmlns:ns3="urn:com:polycom:api:rest:plcm-mcu"
xmlns:ns4="urn:com:polycom:api:rest:plcm-mcu-list">
 <plcm-mcu-capacity>
   <mcu-card-type>mpm</mcu-card-type>
   <total-audio-ports>0</total-audio-ports>
   <total-video-ports>0</total-video-ports>
 </ple>
 <ns3:plcm-mcu>
    <ns2:link title="Containing MCU Pool" type="application/vnd.plcm.plcm-mcu-pool+xml"</pre>
rel="urn:com:polycom:api:rest:link-relations:containing-mcu-pool"
href="https://server:port/api/rest/mcu-pools/1"/>
    <ns2:link title="Self Relationship" type="application/vnd.plcm.plcm-mcu+xml" rel="self"</pre>
href="https://server:port/api/rest/mcus/30304b0b-af46-48e3-a69c-aa5c6554f8b8"/>
   <plcm-mcu-capacity>
     <mcu-card-type>mpm</mcu-card-type>
     <total-audio-ports>0</total-audio-ports>
     <total-video-ports>0</total-video-ports>
   </ple>
    <ns3:mcu-identifier>30304b0b-af46-48e3-a69c-aa5c6554f8b8</ns3:mcu-identifier>
    <ns3:name>mcu1</ns3:name>
   <ns3:management-ip>10.47.17.121/ns3:management-ip>
   <ns3:mcu-type>RMX</ns3:mcu-type>
    <ns3:overlap>false</ns3:overlap>
    <ns3:reserved-audio-ports>0</ns3:reserved-audio-ports>
    <ns3:reserved-video-ports>0</ns3:reserved-video-ports>
    <ns3:dma-audio-ports>0</ns3:dma-audio-ports>
    <ns3:dma-video-ports>0</ns3:dma-video-ports>
   <ns3:dma-used-audio-ports>0</ns3:dma-used-audio-ports>
   <ns3:dma-used-video-ports>0</ns3:dma-used-video-ports>
   <ns3:total-used-audio-ports>0</ns3:total-used-audio-ports>
   <ns3:total-used-video-ports>0</ns3:total-used-video-ports>
    <ns3:max-bit-rate>2048</ns3:max-bit-rate>
    <ns3:entity-tag>6f7e56fbb1d6c0b01c787b4976135053/ns3:entity-tag>
 </ns3:plcm-mcu>
</ns4:plcm-mcu-list>
```

```
Status Code: 200 OK
Cache-Control: no-cache
Content-Length: 1798
Content-Type: application/vnd.plcm.plcm-mcu-list+xml
Date: Tue, 22 May 2012 21:12:38 GMT
Etag: "7907a2a487e2a34c2bc412eb765b48b2"
Expires: Wed, 31 Dec 2015 17:00:00 MST
Pragma: No-cache
Server: false
X-Powered-By: Proximo
```

Get MCU

- HTTP Method: GET
- URL: https://<server>:<port>/api/rest/mcus/<mcu_id>?type=identifier or
- https://<server>:<port>/api/rest/mcus/<mcu name>?type=name

Response Body:

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<ns3:plcm-mcu xmlns="http://www.w3.org/2005/Atom"</pre>
xmlns:ns2="urn:com:polycom:api:rest:plcm-mcu-capacity"
xmlns:ns3="urn:com:polycom:api:rest:plcm-mcu">
 <link title="Containing MCU Pool" type="application/vnd.plcm.plcm-mcu-pool+xml"</pre>
rel="urn:com:polycom:api:rest:link-relations:containing-mcu-pool"
href="https://server:port/api/rest/mcu-pools/1"/>
  <link title="Self Relationship" type="application/vnd.plcm.plcm-mcu+xml" rel="self"</pre>
href="https://server:port/api/rest/mcus/30304b0b-af46-48e3-a69c-aa5c6554f8b8"/>
  <ns2:plcm-mcu-capacity>
    <ns2:mcu-card-type>mpm</ns2:mcu-card-type>
    <ns2:total-audio-ports>20</ns2:total-audio-ports>
    <ns2:total-video-ports>76</ns2:total-video-ports>
  </ns2:plcm-mcu-capacity>
  <ns3:mcu-identifier>30304b0b-af46-48e3-a69c-aa5c6554f8b8</ns3:mcu-identifier>
  <ns3:name>mcu1</ns3:name>
  <ns3:management-ip>10.47.17.121/ns3:management-ip>
  <ns3:mcu-type>RMX</ns3:mcu-type>
  <ns3:overlap>false</ns3:overlap>
  <ns3:reserved-audio-ports>0</ns3:reserved-audio-ports>
  <ns3:reserved-video-ports>0</ns3:reserved-video-ports>
  <ns3:dma-audio-ports>20</ns3:dma-audio-ports>
  <ns3:dma-video-ports>76</ns3:dma-video-ports>
  <ns3:dma-used-audio-ports>0</ns3:dma-used-audio-ports>
  <ns3:dma-used-video-ports>0</ns3:dma-used-video-ports>
  <ns3:total-used-audio-ports>0</ns3:total-used-audio-ports>
  <ns3:total-used-video-ports>0</ns3:total-used-video-ports>
  <ns3:max-bit-rate>2048</ns3:max-bit-rate>
  <ns3:entity-tag>b76b62602fc8ef847372d726746c2e3c/ns3:entity-tag>
</ns3:plcm-mcu>
```

Status Code: 200 OK Cache-Control: no-cache Content-Length: 1583

Content-Type: application/vnd.plcm.plcm-mcu+xml

Date: Tue, 22 May 2012 21:17:01 GMT Etag: "b76b62602fc8ef847372d726746c2e3c" Expires: Wed, 31 Dec 2015 17:00:00 MST

Pragma: No-cache Server: false

X-Powered-By: Proximo

MCU Pool Resource

Get MCU Pool List

• HTTP Method: GET

• URL: https://<server>:<port>/api/rest/mcu-pools

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<ns4:plcm-mcu-pool-list xmlns="urn:com:polycom:api:rest:plcm-mcu-capacity"</pre>
xmlns:ns2="http://www.w3.org/2005/Atom" xmlns:ns3="urn:com:polycom:api:rest:plcm-mcu-pool"
xmlns:ns4="urn:com:polycom:api:rest:plcm-mcu-pool-list">
  <plcm-mcu-capacity>
    <mcu-card-type>mpm</mcu-card-type>
    <total-audio-ports>20</total-audio-ports>
    <total-video-ports>76</total-video-ports>
  </ple>
  <ns3:plcm-mcu-pool>
    <plcm-mcu-capacity>
      <mcu-card-type>mpm</mcu-card-type>
      <total-audio-ports>20</total-audio-ports>
      <total-video-ports>76</total-video-ports>
    </ple>
    <ns2:link title="Contained MCU" type="application/vnd.plcm.plcm-mcu+xml"</pre>
rel="urn:com:polycom:api:rest:link-relations:contained-mcu"
href="https://server:port/api/rest/mcus/30304b0b-af46-48e3-a69c-aa5c6554f8b8"/>
    <ns2:link title="Containing MCU Pool Order"</pre>
type="application/vnd.plcm.plcm-mcu-pool-order+xml"
rel="urn:com:polycom:api:rest:link-relations:containing-mcu-pool-order"
href="https://server:port/api/rest/mcu-pool-orders/0"/>
   <ns2:link title="Self Relationship" type="application/vnd.plcm.plcm-mcu-pool+xml" rel="self"</pre>
href="https://server:port/api/rest/mcu-pools/1"/>
   <ns3:mcu-pool-identifier>1</ns3:mcu-pool-identifier>
    <ns3:name>mcu-pool-1</ns3:name>
    <ns3:entity-tag>28891f334c7ed92de9b3bb1ef82a457f</ns3:entity-tag>
    <ns3:mcu-identifier>
      <ns3:mcu-identifier>30304b0b-af46-48e3-a69c-aa5c6554f8b8</ns3:mcu-identifier>
    </ns3:mcu-identifier>
  </ns3:plcm-mcu-pool>
</ns4:plcm-mcu-pool-list>
```

Response Header:

```
Status Code: 200 OK
Cache-Control: no-cache
Content-Length: 1602
Content-Type: application/vnd.plcm.plcm-mcu-pool-list+xml
Date: Tue, 22 May 2012 21:19:27 GMT
Etag: "385ac9b924a0ada2bd18a587699b20ff"
Expires: Wed, 31 Dec 2015 17:00:00 MST
Pragma: No-cache
Server: false
X-Powered-By: Proximo
```

Get MCU Pool

HTTP Method: GET

- URL: https://<server>:<port>/api/rest/mcu-pools/1?type=identifier
 or
- https://<server>:<port>/api/rest/mcu-pools/mcu-pool-1?type=name

Request Body:

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<ns3:plcm-mcu-pool xmlns="urn:com:polycom:api:rest:plcm-mcu-capacity"</pre>
xmlns:ns2="http://www.w3.org/2005/Atom" xmlns:ns3="urn:com:polycom:api:rest:plcm-mcu-pool">
  <ple><plcm-mcu-capacity>
    <mcu-card-type>mpm</mcu-card-type>
    <total-audio-ports>20</total-audio-ports>
    <total-video-ports>76</total-video-ports>
  </ple>
  <ns2:link title="Contained MCU" type="application/vnd.plcm.plcm-mcu+xml"</pre>
rel="urn:com:polycom:api:rest:link-relations:contained-mcu"
href="https://joanne-vm2.prx.eng.westminster.polycom.com:8443/api/rest/mcus/30304b0b-af46-48e3-
a69c-aa5c6554f8b8"/>
  <ns2:link title="Containing MCU Pool Order"</pre>
type="application/vnd.plcm.plcm-mcu-pool-order+xml"
rel="urn:com:polycom:api:rest:link-relations:containing-mcu-pool-order"
href="https://joanne-vm2.prx.eng.westminster.polycom.com:8443/api/rest/mcu-pool-orders/0"/>
  <ns2:link title="Self Relationship" type="application/vnd.plcm.plcm-mcu-pool+xml" rel="self"</pre>
href="https://joanne-vm2.prx.eng.westminster.polycom.com:8443/api/rest/mcu-pools/1"/>
  <ns3:mcu-pool-identifier>1</ns3:mcu-pool-identifier>
  <ns3:name>mcu-pool-1</ns3:name>
  <ns3:entity-tag>28891f334c7ed92de9b3bb1ef82a457f</ns3:entity-tag>
  <ns3:mcu-identifier>
    <ns3:mcu-identifier>30304b0b-af46-48e3-a69c-aa5c6554f8b8</ns3:mcu-identifier>
  </ns3:mcu-identifier>
</ns3:plcm-mcu-pool>
```

Response Header:

```
Status Code: 200 OK
Cache-Control: no-cache
Content-Length: 1342
Content-Type: application/vnd.plcm.plcm-mcu-pool+xml
Date: Tue, 22 May 2012 22:49:17 GMT
Etag: "28891f334c7ed92de9b3bb1ef82a457f"
Expires: Wed, 31 Dec 2015 17:00:00 MST
Pragma: No-cache
Server: false
X-Powered-By: Proximo
```

MCU Pool Order Resource

Get MCU Pool Order List

● HTTP Method: GET

• URL: https://<server>:<port>/api/rest/mcu-pool-orders

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<ns4:plcm-mcu-pool-order-list xmlns="urn:com:polycom:api:rest:plcm-mcu-capacity"</pre>
xmlns:ns2="http://www.w3.org/2005/Atom"
xmlns:ns3="urn:com:polycom:api:rest:plcm-mcu-pool-order"
xmlns:ns4="urn:com:polycom:api:rest:plcm-mcu-pool-order-list">
  <plcm-mcu-capacity>
    <mcu-card-type>mpm</mcu-card-type>
    <total-audio-ports>20</total-audio-ports>
    <total-video-ports>76</total-video-ports>
  </ple>
  <ns3:plcm-mcu-pool-order>
    <ple><plcm-mcu-capacity>
      <mcu-card-type>mpm</mcu-card-type>
      <total-audio-ports>20</total-audio-ports>
      <total-video-ports>76</total-video-ports>
    </ple>
    <ns2:link title="Contained MCU Pool" type="application/vnd.plcm.plcm-mcu-pool+xml"</pre>
rel="urn:com:polycom:api:rest:link-relations:contained-mcu-pool"
href="https://server:port/api/rest/mcu-pools/1"/>
    <ns2:link title="Self Relationship" type="application/vnd.plcm.plcm-mcu-pool-order+xml"</pre>
rel="self" href="https://server:port/api/rest/mcu-pool-orders/0"/>
    <ns3:mcu-pool-order-identifier>0</ns3:mcu-pool-order-identifier>
    <ns3:name>Factory Pool Order</ns3:name>
    <ns3:description>Factory Pool Order</ns3:description>
    <ns3:fall-back-to-available-mcu>true</ns3:fall-back-to-available-mcu>
    <ns3:default-mcu-pool-order>true</ns3:default-mcu-pool-order>
    <ns3:priority>1</ns3:priority>
    <ns3:entity-tag>b80f419ebf5e269ad9bcbca3c21f4afb<//ns3:entity-tag>
    <ns3:mcu-pool-identifier>
      <ns3:mcu-pool-identifier>1</ns3:mcu-pool-identifier>
    </ns3:mcu-pool-identifier>
  </ns3:plcm-mcu-pool-order>
</ns4:plcm-mcu-pool-order-list>
```

Response Header:

```
Status Code: 200 OK
Cache-Control: no-cache
Content-Length: 1594
Content-Type: application/vnd.plcm.plcm-mcu-pool-order-list+xml
Date: Tue, 22 May 2012 21:22:14 GMT
Etag: "83ad80fbe866cdbb815f0f8be3493e48"
Expires: Wed, 31 Dec 2015 17:00:00 MST
Pragma: No-cache
Server: false
X-Powered-By: Proximo
```

Get MCU Pool Order

● HTTP Method: GET

- URL: https://<server>:<port>/api/rest/mcu-pool-orders /0?type=identifier or
- https://<server>:<port>/api/rest/mcu-pool-orders/Factory%20Pool%20Order?ty pe=name

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<ns3:plcm-mcu-pool-order xmlns="urn:com:polycom:api:rest:plcm-mcu-capacity"</pre>
xmlns:ns2="http://www.w3.org/2005/Atom"
xmlns:ns3="urn:com:polycom:api:rest:plcm-mcu-pool-order">
  <plcm-mcu-capacity>
    <mcu-card-type>mpm</mcu-card-type>
    <total-audio-ports>20</total-audio-ports>
    <total-video-ports>76</total-video-ports>
  </ple>
  <ns2:link title="Contained MCU Pool" type="application/vnd.plcm.plcm-mcu-pool+xml"</pre>
rel="urn:com:polycom:api:rest:link-relations:contained-mcu-pool"
href="https://server:port/api/rest/mcu-pools/1"/>
  <ns2:link title="Self Relationship" type="application/vnd.plcm.plcm-mcu-pool-order+xml"</pre>
rel="self" href="https://server:port/api/rest/mcu-pool-orders/0"/>
  <ns3:mcu-pool-order-identifier>0</ns3:mcu-pool-order-identifier>
  <ns3:name>Factory Pool Order</ns3:name>
  <ns3:description>Factory Pool Order</ns3:description>
  <ns3:fall-back-to-available-mcu>true</ns3:fall-back-to-available-mcu>
  <ns3:default-mcu-pool-order>true</ns3:default-mcu-pool-order>
  <ns3:entity-tag>b80f419ebf5e269ad9bcbca3c21f4afb/ns3:entity-tag>
  <ns3:mcu-pool-identifier>
    <ns3:mcu-pool-identifier>1</ns3:mcu-pool-identifier>
  </ns3:mcu-pool-identifier>
</ns3:plcm-mcu-pool-order>
```

Response Header:

```
Status Code: 200 OK
Cache-Control: no-cache
Content-Length: 1286
Content-Type: application/vnd.plcm.plcm-mcu-pool-order+xml
Date: Tue, 22 May 2012 21:24:05 GMT
Etag: "b80f419ebf5e269ad9bcbca3c21f4afb"
Expires: Wed, 31 Dec 2015 17:00:00 MST
Pragma: No-cache
Server: false
X-Powered-By: Proximo
```

Subscription Resource

Get Subscription List

• HTTP Method: GET

• URL: https://<server>:<port>/api/rest/subscriptions

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<ns4:plcm-subscription-list xmlns="http://www.w3.org/2005/Atom"</pre>
xmlns:ns2="urn:com:polycom:api:rest:plcm-error"
xmlns:ns3="urn:com:polycom:api:rest:plcm-subscription"
xmlns:ns4="urn:com:polycom:api:rest:plcm-subscription-list">
  <ns3:plcm-subscription>
   <link title="Self Relationship" type="application/vnd.plcm.plcm-subscription+xml" rel="self"</pre>
href="https://server:port/api/rest/subscriptions/f6f21d3d-bf8e-4884-bbd6-41374dbad353"/>
<ns3:subscription-identifier>f6f21d3d-bf8e-4884-bbd6-41374dbad353</ns3:subscription-identifier>
<ns3:consumer-url>https://10.33.24.38:9000/api/rest/notifications/conference/ns3:consumer-url>
<ns3:subject-resource-url>https://server:port/api/rest/conferences</ns3:subject-resource-url>
    <ns3:time-to-live>3600</ns3:time-to-live>
    <ns3:subscriptionOwnerDomain>LOCAL/ns3:subscriptionOwnerDomain>
    <ns3:subscriptionOwnerUsername>admin/ns3:subscriptionOwnerUsername>
    <ns3:send-update-notifications>true</ns3:send-update-notifications>
    <ns3:entity-tag>f81acedba6687b6f8fc3eb644301c890/ns3:entity-tag>
<ns3:calculated-expiration-date>2012-05-22T17:09:53.752-06:00</ns3:calculated-expiration-date>
  </ns3:plcm-subscription>
</ns4:plcm-subscription-list>
```

Response Header:

```
Status Code: 200 OK
Cache-Control: no-cache
Content-Length: 1293
Content-Type: application/vnd.plcm.plcm-subscription-list+xml
Date: Tue, 22 May 2012 22:10:27 GMT
Etag: "f8lacedba6687b6f8fc3eb644301c890"
Expires: Wed, 31 Dec 2015 17:00:00 MST
Pragma: No-cache
Server: false
X-Powered-By: Proximo
```

Get Subscription

• HTTP Method: GET

URL:

https://<server>:<port>/api/rest/subscriptions/f6f21d3d-bf8e-4884-bbd6-41 374dbad353

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<ns3:plcm-subscription xmlns="http://www.w3.org/2005/Atom"</pre>
xmlns:ns2="urn:com:polycom:api:rest:plcm-error"
xmlns:ns3="urn:com:polycom:api:rest:plcm-subscription">
  <link title="Self Relationship" type="application/vnd.plcm.plcm-subscription+xml" rel="self"</pre>
href="https://server:port/api/rest/subscriptions/f6f2ld3d-bf8e-4884-bbd6-41374dbad353"/>
<ns3:subscription-identifier>f6f21d3d-bf8e-4884-bbd6-41374dbad353</ns3:subscription-identifier>
<ns3:consumer-url>https://10.33.24.38:9000/api/rest/notifications/conference/ns3:consumer-url>
 <ns3:subject-resource-url>https://server:port/api/rest/conferences</ns3:subject-resource-url>
  <ns3:time-to-live>3600</ns3:time-to-live>
  <ns3:subscriptionOwnerDomain>LOCAL</ns3:subscriptionOwnerDomain>
  <ns3:subscriptionOwnerUsername>admin/ns3:subscriptionOwnerUsername>
  <ns3:send-update-notifications>true</ns3:send-update-notifications>
  <ns3:entity-tag>f81acedba6687b6f8fc3eb644301c890</ns3:entity-tag>
<ns3:calculated-expiration-date>2012-05-22T17:09:53.752-06:00/ns3:calculated-expiration-date>
</ns3:plcm-subscription>
```

Response Header:

```
Status Code: 200 OK
Cache-Control: no-cache
Content-Length: 1176
Content-Type: application/vnd.plcm.plcm-subscription+xml
Date: Tue, 22 May 2012 22:11:30 GMT
Etag: "f8lacedba6687b6f8fc3eb644301c890"
Expires: Wed, 31 Dec 2015 17:00:00 MST
Pragma: No-cache
Server: false
X-Powered-By: Proximo
```

Update Subscription

● HTTP Method: PUT

URL:

https://<server>:<port>/api/rest/subscriptions/f6f21d3d-bf8e-4884-bbd6-41 374dbad353

Request Header: Content-Type: application/vnd.plcm.plcm-subscription+xml



Note

You can also use Content-Type: */*

Request Body:

Response Header:

```
Status Code: 204 No Content Cache-Control: no-cache
```

Date: Tue, 22 May 2012 22:13:59 GMT Expires: Wed, 31 Dec 2015 17:00:00 MST

Pragma: No-cache Server: false X-Powered-By: Proximo

Delete Subscription

• HTTP Method: DELETE

URL:

https://<server>:<port>/api/rest/subscriptions/f6f2ld3d-bf8e-4884-bbd6-41 374dbad353

Response Header:

```
Status Code: 204 No Content
Cache-Control: no-cache
Date: Tue, 22 May 2012 22:13:59 GMT
Expires: Wed, 31 Dec 2015 17:00:00 MST
Pragma: No-cache
Server: false
X-Powered-By: Proximo
```

Send Update Notification Now

• HTTP Method: POST

URL:

https://<server>:<port>/api/rest/subscriptions/f6f21d3d-bf8e-4884-bbd6-41 374dbad353/send-update-notification-now

```
Status Code: 204 No Content
Cache-Control: no-cache
Date: Tue, 22 May 2012 22:13:59 GMT
Expires: Wed, 31 Dec 2015 17:00:00 MST
Pragma: No-cache
Server: false
X-Powered-By: Proximo
```

Status Resource

Get Status

• HTTP Method: GET

• URL: https://<server>:<port>/api/rest/status

Response Header:

```
Status Code: 204 No Content
Cache-Control: no-cache
Date: Tue, 22 May 2012 21:40:35 GMT
Expires: Wed, 31 Dec 2015 17:00:00 MST
Pragma: No-cache
Server: false
X-Powered-By: Proximo
```

Territory Resource

Get Territory List

- HTTP Method: GET
- URL: https://<server>:<port>/api/rest/territories

Response Body:

```
Status Code: 200 OK
Cache-Control: no-cache
Content-Length: 947
Content-Type: application/vnd.plcm.plcm-territory-list+xml
Date: Tue, 22 May 2012 21:41:59 GMT
Etag: "13f5ele4e8da811b66d6dd6560cfb693"
Expires: Wed, 31 Dec 2015 17:00:00 MST
Pragma: No-cache
Server: false
X-Powered-By: Proximo
```

Get Territory

- HTTP Method: GET
- URL: https://<server>:<port>/api/rest/territories/id

Response Body:

Response Header:

```
Status Code: 200 OK
Cache-Control: no-cache
Content-Length: 834
Content-Type: application/vnd.plcm.plcm-territory+xml
Date: Tue, 22 May 2012 22:03:29 GMT
Etag: "a35d5f3lef19e5042cd7427385b2133b"
Expires: Wed, 31 Dec 2015 17:00:00 MST
Pragma: No-cache
Server: false
X-Powered-By: Proximo
```

User Resource

Get User List

HTTP Method: GET

• URL: https://<server>:<port>/api/rest/users

Search Users

- HTTP Method: GET
- URL: https://<server>:<port>/api/rest/users?username=<username>

Response Body:

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<ns5:plcm-user-list xmlns="htt//www.w3.org/2005/Atom"</pre>
xmlns:ns2="urn:com:polycom:api:rest:plcm-user-role"
xmlns:ns3="urn:com:polycom:api:rest:plcm-user-role-list"
xmlns:ns4="urn:com:polycom:api:rest:plcm-user"
xmlns:ns5="urn:com:polycom:api:rest:plcm-user-list">
  <ns4:plcm-user>
    <link title="Self Relationship" type="application/vnd.plcm.plcm-user+xml" rel="self"</pre>
href="https://server:port/api/rest/users/LOCAL/admin"/>
    <link title="Owned Conference Rooms" type="application/vnd.plcm.plcm-conference-room+xml"</pre>
rel="urn:com:polycom:api:rest:link-relations:owned-conference-rooms"
href="https://server:port/api/rest/conference-rooms?username=admin&domain=LOCAL"/>
    <plcm-user-role-list>
      <ns2:plcm-user-role>
       <ns2:name>Administrator
      </ns2:plcm-user-role>
      <ns2:plcm-user-role>
       <ns2:name>Auditor</ns2:name>
      </ns2:plcm-user-role>
      <ns2:plcm-user-role>
       <ns2:name>Provisioner</ns2:name>
      </ns2:plcm-user-role>
    </ple>
    <ns4:username>admin</ns4:username>
    <ns4:first-name>Default</ns4:first-name>
    <ns4:last-name>System Administrator User</ns4:last-name>
    <ns4:domain>LOCAL</ns4:domain>
    <ns4:disabled>false</ns4:disabled>
    <ns4:locked>false</ns4:locked>
    <ns4:entity-tag>260dc1ffa9ac8d1bafa2d2ba41115bd7</ns4:entity-tag>
  </ns4:plcm-user>
```

```
Status Code: 200 OK
Cache-Control: no-cache
Content-Length: 1385
Content-Type: application/vnd.plcm.plcm-user-list+xml
Date: Tue, 22 May 2012 15:06:02 GMT
Etag: "260dc1ffa9ac8dlbafa2d2ba41115bd7"
Expires: Wed, 31 Dec 2015 17:00:00 MST
Pragma: No-cache
Server: false
X-Powered-By: Proximo
Server: false
X-Powered-By: Proximo
```

Create User

• HTTP Method: POST

• URL: https://<server>:<port>/api/rest/users

• Request Header: Content-Type: application/vnd.plcm.plcm-user+xml



Note

You can also use Content-Type: */*

Request Body:

Response Header:

```
Status Code: 201 Created
Content-Length: 0
Date: Fri, 18 May 2012 16:00:59 GMT
Etag: "7f2e3a433f13efc0dc91fcae435d4d03"
Location: https://server:port/api/rest/users/LOCAL/user1
Server: false
X-Powered-By: Proximo
```

Update User

• HTTP Method: PUT

URL: https://<server>:<port>/api/rest/users/<domain>/<username>

Request Header: Content-Type: application/vnd.plcm.plcm-user+xml



Note

You can also use Content-Type: */*

Request Body:

Response Header: (note it uses the Etag value returned from the create request)

```
Status Code: 204 No Content
Cache-Control: no-cache
Date: Fri, 18 May 2012 16:14:35 GMT
Etag: "80791ac3c7fd93bf0920aa2d85084750"
Expires: Wed, 31 Dec 2015 17:00:00 MST
Location: https://server:port/api/rest/users/LOCAL/user1
Pragma: No-cache
Server: false
X-Powered-By: Proximo
```

Delete User

- HTTP Method: DELETE
- URL: https://<server>:<port>/api/rest/users/<domain>/<username>

Response Header:

```
Status Code: 204 No Content
Cache-Control: no-cache
Date: Fri, 18 May 2012 16:15:59 GMT
Expires: Wed, 31 Dec 2015 17:00:00 MST
Pragma: No-cache
Server: false
X-Powered-By: Proximo
```