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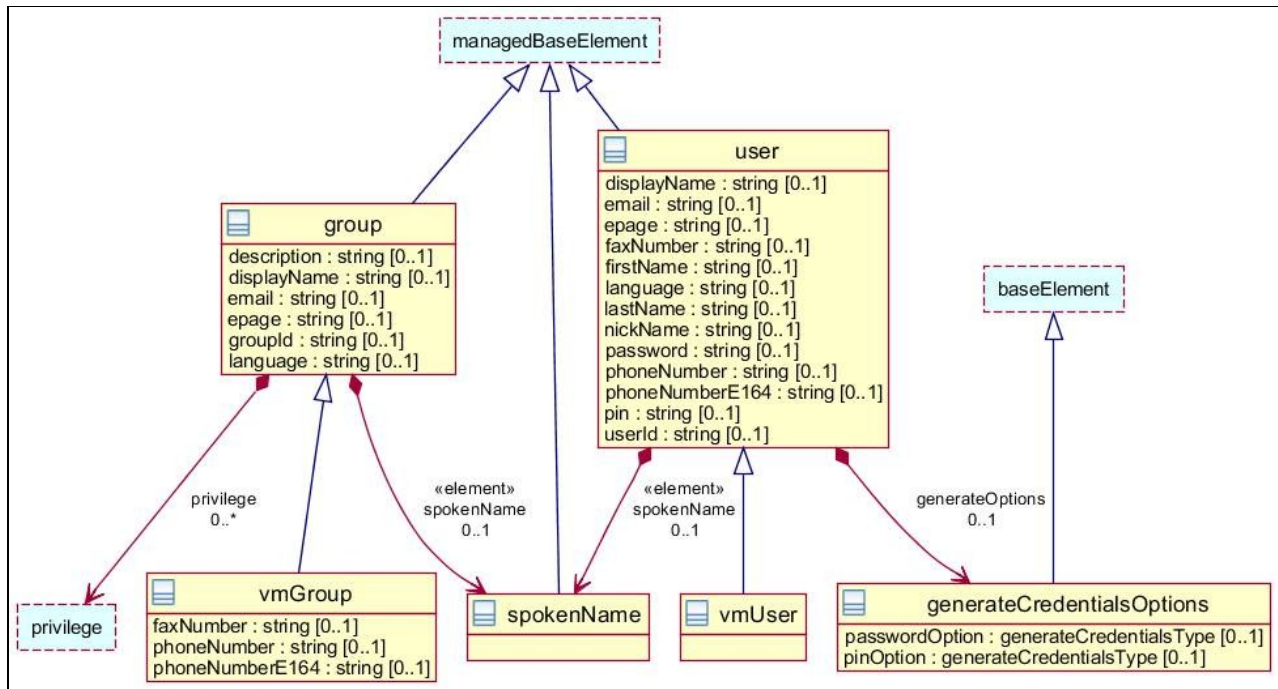
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## User and Group Management

Classes

Figure 5: User and Group Management



User

<b>Class Name</b>	User		
<b>Extends From</b>	ManagedBaseElement		
<b>Description</b>	This class represents a subscriber in a CUE system.		
<b>XML Namespace</b>	http://user.model.rest.aesop.cisco.com		
<b>Field Name</b>	<b>Type</b>	<b>Constraints</b>	<b>Comments</b>
userId	String	Required for POST (create) operation Length 2-31	Specifies the name or ID of the subscriber to be created. The username must be at least 3 and no more than 32 characters in length. CUE allows only letters, numbers, underscore (_), dot (.), and dash (-) in user IDs. User IDs must start with a letter. Do not use spaces in the username.
firstName	String	Length 0-59	First name of a user. Callers use these names to access the extension using the dial-by-name feature. Cannot contain special characters, spaces, or

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			numbers.
lastName	String	Length 0-59	Last name of a user. Callers use these names to access the extension using the dial-by-name or numbers.
nickName	String	Length 0-59	
displayName	String	Length 0-59	User's name displayed within CUE applications.
phoneNumberE164	String	Length 0-15	Full telephone number, including area code, for the subscriber.
phoneNumber	String	Length 0-15	Extension or number for this subscriber.
faxNumber	String	Length 0-15	
password	String	Length 3-32	Password for the subscriber. Valid values contain at least 3 but not more than 32 characters in length. Spaces are not allowed. Acceptable password characters are lowercase letters a to z, uppercase letters A to Z, digits 0 to 9, and the following symbols: - . + = _ ! @ # \$ ^ * ( ) ? / ~ < > & %.
pin	String	Length 3 -16	Personal identification number for the subscriber. Valid values are at least 3 but not more than 19 characters in length, consisting of letters and numbers. No other characters are permitted.
language	String	Language locale string of the form xx_YY (where xx is the two letter language code and YY is the two letter country code).	Language of the prompts played to the user.
email	String	Length 0 - 320	Email address of the subscriber.
epage	String	Length 0 - 320	Epage address of the subscriber.
generateOptions	GenerateCredentialsOptions	For write only (To be used only during the POST and PUT	Used for specifying options for generating password and pin during create and update operation.

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		operations).	
spokenName	SpokenName	For Read only	This field indicates if a spoken name is configured for the user.

## GenerateCredentialsOptions

<b>Class Name</b>	GenerateCredentialsOptions ( <i>Enumeration Class</i> )
<b>Extends From</b>	
<b>Description</b>	Enumeration class used specifying options for auto credential generation during user create and delete operations.
<b>XML Namespace</b>	http://user.model.rest.aesop.cisco.com
<b>Enum Values</b>	GenerateBlank, GenerateRandom, UserSpecified

## Spoken Name

<b>Class Name</b>	SpokenName
<b>Extends From</b>	ManagedBaseElement
<b>Description</b>	This class represents the configured spoken name for a user. It does not define and fields locally and contains only the "resourceURI" field inherited from the parent class.
<b>XML Namespace</b>	http://user.model.rest.aesop.cisco.com

## VmUser

<b>Class Name</b>	VmUser
<b>Extends From</b>	User
<b>Description</b>	This class represents voicemail subscribers in CUE system. It does not define and fields locally and inherits all its field from the base class "User".
<b>XML Namespace</b>	http://user.model.rest.voicemail.aesop.cisco.com

## Group

<b>Class Name</b>	Group		
<b>Extends From</b>	ManagedBaseElement		
<b>Description</b>	Represents "groups" in CUE system. Usually created to manage privileges for a group of users.		
<b>XML Namespace</b>	http://user.model.rest.aesop.cisco.com		
<b>Field Name</b>	<b>Type</b>	<b>Constraints</b>	<b>Comments</b>
groupId	String		Name of the group.

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		Required for POST (create) operation Length 2-31	
description	String	Length 0-40	For providing a brief description about the group.
displayName	String	Length 0-59 If no value is specified during create, system will assign a value using groupId field value.	Full group name. Callers use the full name to access the extension using the dial-by-name feature.
email	String	Length 0 - 320	Email address of the group.
epage	String	Length 0 - 320	Epage address of the group.
privilege	Privilege	minOccurs="0" maxOccurs="unbounded"	Collection of privilege objects assigned to this group.
spokenName	SpokenName	For Read only	This field indicates if a spoken name is configured for the user.

**VmGroup**

<b>Class Name</b>	VmGroup		
<b>Extends From</b>	Group		
<b>Description</b>	Represents "groups" in CUE system. Usually created to manage privileges for a group of users and to assign members to a general-delivery mailbox. Inherits all the fields from base class "Group", as well as define local fields specific to voicemail-related features.		
<b>XML Namespace</b>	http://user.model.rest.voicemail.aesop.cisco.com		
<b>Field Name</b>	<b>Type</b>	<b>Constraints</b>	<b>Comments</b>
faxNumber	String	Length 0 -15	Group fax number
phoneNumberE164	String	Length 0-15	Full telephone number, including area code for the group.
phoneNumber	String	Length 0-15	Primary extension for the group's general-delivery mailbox.

**Resources**

Resource URI	Operation	Input	Return Value
/voicemail/users	GET (read		BaseElementList

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	all users)		containing "VmUser" objects.
		POST create user)	VmUser
/voicemail/users/{userid}	GET (read a user)		VmUser
	PUT (update a user)	VmUser	
	DELETE (delete user)		
/voicemail/users/{userid}/groupmemberships	GET (read groups where this user is a member)		BaseElementList containing "VmGroup" objects
	POST (add this user to a group as member)	VmGroup (Only Resource URI)	
/voicemail/users/{userid}/groupmemberships/{groupid}	DELETE (remove this user from a group as member)		
/voicemail/users/{userid}/groupownerships	GET (read groups where this user is an owner)		BaseElementList containing "VmGroup" objects
	POST (add this user to a group as owner)	VmGroup (Only Resource URI)	
/voicemail/users/{userid}/groupownerships/{groupid}	DELETE (remove this user as owner from a group)		
/voicemail/users/{userid}/spokenname	GET (download spoken name for this user)	Accept: audio/x-wav	Audio wav file of spoken name for user
	PUT (Upload audio wav file for spoken name for user)	Content-type: audio/x-wav	
/voicemail/groups			

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	GET (read all groups)		BaseElementList containing "VmGroup" objects
	POST (create a new group)	VmGroup (including group's Privileges)	
/voicemail/groups/{groupid}	PUT (update a group)	VmGroup (including group's Privileges)	
	GET (read a group)		VmGroup (including group's Privileges)
	DELETE (delete group)		
/voicemail/groups/{groupid}/groupmemberships	GET (read groups where this group is a member)		BaseElementList containing "VmGroup" objects
	POST (add the addressed group as member of another group)	VmGroup (Resource URI only)	
/voicemail/groups/{groupid}/groupmemberships/{groupid}	DELETE (remove the addressed group as member from another group)		
/voicemail/groups/{groupid}/groupownerships	GET (read groups where this group is an owner)		BaseElementList containing "VmGroup" objects
	PUT (add the addressed group as member of another group)	VmGroup (Resource URI only)	
/voicemail/groups/{groupid}/groupownerships/{groupid}	DELETE (remove the		

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	addressed group as owner of another group)		
/voicemail/groups/{groupid}/members	GET (read all members of a group)		BaseElementList containing "VmGroup" and "VmUser" objects
	POST (add a user or group as member to this group)	VmUser or VmGroup	
/voicemail/groups/{groupid}/members/{memberId}	DELETE (remove a member from this group)		
/voicemail/groups/{groupid}/owners	GET (read all owners of this group)		BaseElementList containing "VmGroup" and "VmUser" objects
	POST (add a user or group as owner to this group)	VmUser or VmGroup	
/voicemail/groups/{groupid}/owners/{ownerId}	DELETE (remove an owner from this group)		
/voicemail/groups/{groupid}/privileges	GET (get list of privileges for this group)		BaseElementList containing "Privilege" objects
	POST (Add a privilege to this group)	Privilege (with Resource URI or name) (to set multiple privileges for a group use update group operation)	
/voicemail/groups/{groupid}/privileges/{privilegeName}	DELETE (Remove a privilege from this group)		



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/rest/groups/{groupid}/spokenname	GET (download spoken name for group)	Accept: audio/x-wav	Audio wav file of spoken name for user
	PUT (Upload spoken name for group)	Content-type: audio/x-wav	

### User and Group Examples

#### Create User

Create a new user. Data for the new user is read from local file data/create\_userx.xml.

```
$ cat data/create_userx.xml
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<vmUser>
  <displayName>Mr. X Yzee</displayName>
  <email>email_xyz@email.com</email>
  <epage>epage_xyz@address.com</epage>
  <firstName>Axe</firstName>
  <language>en_US</language>
  <lastName>Yzee</lastName>
  <nickName>xyz</nickName>
  <phoneNumber>1010</phoneNumber>
  <phoneNumberE164>213151273</phoneNumberE164>
  <pin>1234</pin>
  <generateOptions>
    <passwordOption>GenerateRandom</passwordOption>
  </generateOptions>
  <userId>userX</userId>
</vmUser>
```

```
$ curl -i -X POST -H 'Authorization: Basic Y2lzY286Y2lzY28=' -H 'Content-type: application/xml'
-d @./data/create_userx.xml http://172.27.104.144/rest/voicemail/users
```

```
HTTP/1.1 201 Created
Server: Apache-Coyote/1.1
Set-Cookie: JSESSIONID=CDE84ED1DFCC25FA7F8029EE0C27E755; Path=/rest
PI-Version: 8.0.0.150
Location: http://172.27.104.144/rest/voicemail/users/voicemail/users/userX
Content-Type: text/plain
Transfer-Encoding: chunked
Date: Fri, 04 Dec 2009 02:11:43 GMT
Created - /voicemail/users/userX
```

#### Read All Users

Read all users. Specify only first name and lastName fields to be included in the results.

```
$ curl -i -X GET -H 'Authorization: Basic Y2lzY286Y2lzY28=' http://172.27.104.144/rest/voicemail
/users?fields=firstName,lastName
```

```
HTTP/1.1 200 OK
Server: Apache-Coyote/1.1
Set-Cookie: JSESSIONID=441971AE997CDD32051F45F1544A8231; Path=/rest
PI-Version: 8.0.0.150
```

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Content-Type: application/xml  
Transfer-Encoding: chunked  
Date: Fri, 04 Dec 2009 02:03:00 GMT

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<baseElementList>
  <baseElement xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:ns3="http://user.model.rest.voicemail.aesop.cisco.com" xsi:type="ns3:vmUser">
  <resourceURI>/voicemail/users/userX</resourceURI>
  <firstName>Axe</firstName>
  <lastName>Yzee</lastName>
</baseElement>
  <baseElement xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:ns3="http://user.model.rest.voicemail.aesop.cisco.com" xsi:type="ns3:vmUser">
  <resourceURI>/voicemail/users/cisco</resourceURI>
  <firstName>first</firstName>
  <lastName>cisco</lastName>
</baseElement>
</baseElementList>
```

### Create Group

Create a Group. Data for the new group is read from local file ./data/create\_groupy.xml.

```
$ cat data/create_groupy.xml
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<vmGroup>
  <description>GroupY</description>
  <displayName>GroupWhy</displayName>
  <email>email@noreply.com</email>
  <groupId>groupY</groupId>
  <language>en_US</language>
  <privilege>
    <resourceURI>/privileges/tcv-payroll</resourceURI>
  </privilege>
  <privilege>
    <name>ViewHistoricalReports</name>
  </privilege>
  <privilege>
    <name>ManagePublicList</name>
  </privilege>
  <privilege>
    <resourceURI>/privileges/ManagePrompts</resourceURI>
  </privilege>
</vmGroup>

$ curl -i -X POST -H 'Authorization: Basic Y2lzY286Y2lzY28=' -H 'Content-type: application/xml'
-d @./data/create_groupy.xml http://172.27.104.144/rest/voicemail/groups
HTTP/1.1 201 Created
Server: Apache-Coyote/1.1
Set-Cookie: JSESSIONID=3B975C8500C143DB10E47B4970DDB2C0; Path=/rest
PI-Version: 8.0.0.150
Location: http://172.27.104.144/rest/voicemail/groups/voicemail/groups/groupY
Content-Type: text/plain
Transfer-Encoding: chunked
Date: Fri, 04 Dec 2009 06:15:16 GMT
Created - /voicemail/groups/groupY
```

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### Add User to a Group

Add userX as member to groupY. Input data is read from local file ./data/userx.xml.

```
$ cat ./data/userx.xml
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<vmUser>
  <userId>userX</userId>
</vmUser>

$ curl -i -X POST -H 'Authorization: Basic Y2lzY286Y2lzY28=' -H 'Content-type: application/xml'
-d @./data/userx.xml
http://172.27.104.144/rest/voicemail/groups/groupY/members

HTTP/1.1 200 OK
Server: Apache-Coyote/1.1
Set-Cookie: JSESSIONID=58D138AD5DE9ECCBD801D86F0518755C; Path=/rest
PI-Version: 8.0.0.150
Content-Type: text/plain
Transfer-Encoding: chunked
Date: Fri, 04 Dec 2009 06:22:57 GMT

Added userX as member to Group - groupY
```

### Remove User from a Group

Remove userX as member of groupY.

```
$ curl -i -X DELETE -H 'Authorization: Basic Y2lzY286Y2lzY28='
http://172.27.104.144/rest/voicemail/groups/groupY/members/userX

HTTP/1.1 200 OK
Server: Apache-Coyote/1.1
Set-Cookie: JSESSIONID=C182CA0E8CF34573508C6D31E99DA6A4; Path=/rest
PI-Version: 8.0.0.150
Content-Type: text/plain
Transfer-Encoding: chunked
Date: Fri, 04 Dec 2009 06:34:46 GMT

Removed userX as member of Group - groupY
```

### Upload Spoken Name for Group

Upload spoken name for groupX. The spoken name is uploaded from local wav file data/groupX.upload.wav

```
$ curl -i -T ./data/groupX.upload.wav -H 'Authorization: Basic Y2lzY286Y2lzY28=' -H
'Content-type: audio/x-wav'
http://172.27.104.144/rest/voicemail/groups/groupX/spokenname
HTTP/1.1 100 Continue

HTTP/1.1 200 OK
Server: Apache-Coyote/1.1
Set-Cookie: JSESSIONID=6EDB5242A677B1CD6495DD96A2D5D256; Path=/rest
PI-Version: 8.0.0.150
Content-Type: text/plain
Transfer-Encoding: chunked
Date: Fri, 04 Dec 2009 06:38:50 GMT

Uploaded - /voicemail/groups/groupX/spokenname
```

```
$ curl -i -X GET -H 'Authorization: Basic Y2lzY286Y2lzY28='
```

### Add User to a Group

## Cisco\_Unity\_Express\_--\_User\_and\_Group\_Management\_REST\_API\_Service\_Operation

```
http://172.27.104.144/rest/voicemail/groups/groupX
HTTP/1.1 200 OK
Server: Apache-Coyote/1.1
Set-Cookie: JSESSIONID=A98FDBA862CD2DFAC7DE079ACE304678; Path=/rest
PI-Version: 8.0.0.150
Content-Type: application/xml
Content-Length: 488
Date: Fri, 04 Dec 2009 06:42:44 GMT
```

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<vmGroup>
  <resourceURI>/voicemail/groups/groupX</resourceURI>
  <description>Group X's Description</description>
  <displayName>Group Hacks</displayName>
  <email>email@noreply.com</email>
  <groupId>groupX</groupId>
  <language>en_US</language>
  <spokenName>
    <resourceURI>/voicemail/groups/groupX/spokenname</resourceURI>
  </spokenName>
  <faxNumber>56908762</faxNumber>
  <phoneNumber>7654</phoneNumber>
  <phoneNumberE164>4083925174</phoneNumberE164>
</vmGroup>
```