



# Troubleshooting Tenant Partitioning

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## Troubleshooting Problems While Configuring Tenant Partitioning

This section covers the problems that you might face while configuring tenant partitioning.

### Getting Error Message "COS is referenced by at least one user or user template" while Deleting a Tenant

While deleting a tenant you may get this error message "COS is referenced by at least one user or user template". This error may occur for any other objects that are associated with the tenant. This error occurs if the objects mapped to a tenant like class of service are associated with users belonging to other tenants.

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## Troubleshooting Issues while Deleting Tenant

### Procedure

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#### Step 1

Get object IDs of the class of service objects associated with the tenant using the URI:

```
https://<connection-server>/vmrest/tenants/<TenantObjectId>/coses
```

Get the list of user templates associated with the class of service object ID using the URI:

```
https://<connection-server>/vmrest/usertemplates?query=(CosObjectId%20is%20<CosObjectId>)
```

Here, replace <CosObjectId> with the COS Object Id that belongs to the tenant.

To get the list of user templates that belongs to the tenant, use the URI below:

```
https://<connection-server>/vmrest/usertemplates?query=(CosObjectId%20is%20<CosObjectId>%26PartitionObjectId%20is%20<PartitionObjectId>)
```

- Step 2** Comparing results of the GET operations would provide list of user templates that are associated with the tenant's class of service but are not a part of tenant's partition. You can correct this by changing the class of service association for these user templates.
- Step 3** Get the list of users associated with the class of service Object ID using the URI:  
[https://<connection-server>/vmrest/users?query=\(CosObjectId%20is%20<CosObjectId>\)](https://<connection-server>/vmrest/users?query=(CosObjectId%20is%20<CosObjectId>))  
 Here, replace <CosObjectId> with the class of service Object ID that belongs to the tenant. Now, to get the list of users that belongs to the tenant, use the URI below:  
[https://<connection-server>/vmrest/users?query=\(CosObjectId%20is%20<CosObjectId>%26PartitionObjectId%20is%20<PartitionObjectId>\)](https://<connection-server>/vmrest/users?query=(CosObjectId%20is%20<CosObjectId>%26PartitionObjectId%20is%20<PartitionObjectId>))
- Step 4** Comparing results of both the GET operations provide with the list of users that are associated with the tenant's class of service objects but are not a part of tenant's partition. You can correct this by changing the class of service association for these users.
- Step 5** Repeat Step 2 to Step 3 for all the class of service object IDs.
- Step 6** Repeat Step 1 to Step 3 for other objects associated with a tenant.
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## Users of One Tenant are Able to Send Messages to Users of Other Tenants

If the users of one tenant are able to send messages to users of other tenants through the Web Inbox, touchtone, or voice recognition conversation, do the following:

1. Check the tenant's search space as it may contain partition(s) belonging to other tenants.
2. Run an HTTP GET request on the URI below to get Search Space Object ID for the tenant:  
[https://<connection-server>/vmrest/searchspacesmembers?query=\(PartitionObjectId%20is%20<TenantPartitionObjectId>\)](https://<connection-server>/vmrest/searchspacesmembers?query=(PartitionObjectId%20is%20<TenantPartitionObjectId>))
3. Run an HTTP GET request on the URI below to get the object ID for partitions belonging to the tenant's search space:  
[https://<connection-server>/vmrest/searchspacesmembers?query=\(SearchSpaceObjectId%20is%20<TenantSearchSpaceObjectId>\)](https://<connection-server>/vmrest/searchspacesmembers?query=(SearchSpaceObjectId%20is%20<TenantSearchSpaceObjectId>))
4. Correct this by changing the association.

## Able to Hear the Opening Greeting Without being Asked for the PIN

If you are able to hear the opening greeting without being asked for the PIN, do the following:

1. Open Port Status Monitor and dial the pilot number.
2. On Port Status Monitor and check if the calls are going directly to the opening greeting.
3. To check this, get the list of routing rules for the tenant by sending a GET request to the URI and check the value for the Rule Index field:

GET

[https://<connection-server>/vmrest/routingrules?query=\(SearchSpaceObjectId%20is%20<TenantSearchSpaceObjectId>\)](https://<connection-server>/vmrest/routingrules?query=(SearchSpaceObjectId%20is%20<TenantSearchSpaceObjectId>))

To correct the routing rule order, see the CUPI APIs documentation for Routing Rules API.

[http://docwiki.cisco.com/wiki/Cisco\\_Unity\\_Connection\\_Provisioning\\_Interface\\_%28CUPI%29\\_API\\_-\\_Routing\\_Rules](http://docwiki.cisco.com/wiki/Cisco_Unity_Connection_Provisioning_Interface_%28CUPI%29_API_-_Routing_Rules)

## Getting Option to Select Users from Other Partitions in Directory Result

1. Check Search Scope for the directory handler that belongs to the tenant.
2. If the value of SearchScope field is set to zero then it means that the Search Scope is set to entire server. Set the search scope value to 6 to resolve the issue.
3. There is a possibility that the SearchScope field is set to search-space of some other tenant. Set the search scope to search space of respective tenant to resolve the issue.

### Debugging Steps

1. Check Search Scope for the directory handler that belongs to the tenant. To do this, run the following HTTP GET request:
 

```
https://<connection server>/vmrest/handlers/directoryhandlers?query=(PartitionObjectId%20is%20<TenantPartitionObjectId>)
```

If the value of SearchScope field is set to zero then it means that the Search Scope is set to entire server. Set the search scope value to 6 to resolve the issue.
2. Enable Micro Traces for General Method returns and Parameter values(01), Data access(02), Named property access(03) level ConvSub logs and Named props access(11), CDL Access(12), MIU Access(13) and Search Space(04) level CDE logs from Cisco Unity Connection Serviceability.
3. For all the aliases that you hear over the call, there may be an entry in the diag\_CuCsMgr\_\*.uc log files.
4. Search space can contain multiple partitions. To check if there are multiple partitions in search space, you can run the following HTTP GET request:
  - a. To get the search space: GET
 

```
https://<connection server>/vmrest/searchspaces/searchspaceobjectid/searchspaceobjects?query=(PartitionObjectId%20is%20<TenantPartitionObjectId>)
```

From the above URI search space object ID of a tenant is obtained and it can be used to find the associated partitions with the URI below.
  - b. To get the search space: GET
 

```
https://<connection server>/vmrest/searchspaces/searchspaceobjectid/searchspaceobjects?query=(SearchSpaceObjectId%20is%20<SearchSpaceObjectId>)
```
5. Check if the search space selected in search scope of directory handler belongs to the same tenant or not. To do this, run the following HTTP GET request:
 

```
https://<connection server>/vmrest/handlers/directoryhandlers/<directoryhandler-objectid>
```

Check the search scope object ID, it should be same as that of the tenant.

## Tenant Creation Fails with an Error Message "Non-Tenant users exist on Unity Connection"

When a tenant creation API fails on a freshly installed system, do the following:

Try to create tenant in Unity Connection that is having users of any other partition, the following error displays:

"Invalid parameter. Parameter = [Non-Tenant users exists on Unity Connection.Cannot proceed with Tenant creation.], Value = [tbl\_user]"

## Troubleshooting Problems While Integrating with Call Manager

See the following sections:

### Hearing the Fast Busy Tone on Dialing the Pilot Number

You may hear the fast busy tone while dialing the pilot number in the following two cases:

- Ports are busy or locked
- Ports required reset

Do the following:

1. Check on Cisco Unity Connection Administration if any ports require a reset.
2. In case you find any port group that requires a reset then login to Cisco Unity Connection Administration and go to the Port Groups page.
3. If for any port group, value for the Needs Reset field is Yes, then reset the port group.
4. To investigate if ports are busy:
  - Check if ports are busy or number of incoming calls is significantly high in peak hours only or all the time. Based on the tenant's requirement there might be a need to add additional ports.
  - Check Unity Connection phone system: Check ports in Use Counter using the Real-Time Monitoring Tool (RTMT) to see if ports are busy.
  - The ports may be marked busy even if the ports are locked.
  - To verify, check using the RTMT if the port frees up after a call ends and it answers other incoming calls.
  - Check the CUC Phone System: Check the Ports Locked counter for any locked ports. You can reset the port to resolve the port lock issue.

The Ports locked counter in RTMT can be checked in the CUC Phone System counter.

### Hearing the Error Message - "The system is temporarily unable to complete your call" on Dialing the Pilot Number

To Resolve Issues When there are No Appropriate Routing Rules in Unity Connection

## Procedure

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- Step 1** Enable Threads(11) and Ports(13) level Micro Traces for Arbiter on Cisco Unity Connection Serviceability. Check the `diag_CuCsMgr_*.uc` log file for the phone system:  
'Failed to find routing rule=<PhoneSystem\_1>' where "PhoneSystem\_1" is the name of the phone system
- Step 2** For details on how to view diagnostic traces, see the [Using Diagnostic Traces for Troubleshooting](#) section.
- Step 3** In case, no routing rules exist for the tenant, you can add them using the POST operation on the routing rules API. To identify that which type of routing rules (direct or forward) need to be added, you can use the Port Status Monitor. If the Port Status Monitor displays that the call does not contain a redirecting ID and value for the Reason field is direct, then Direct Routing Rule is added else add the Forward Routing Rule.
- Step 4** If routing rule condition has been removed or is missing from a routing rule on Unity Connection then the routing rule that comes later in the list, is never reached. To check or to investigate the issue:
- Check if tenant's phone system is added as a routing rule condition in the routing rules for that tenant. For more information refer to the Routing Rule Condition APIs available at [http://docwiki.cisco.com/wiki/Cisco\\_Unity\\_Connection\\_APIs](http://docwiki.cisco.com/wiki/Cisco_Unity_Connection_APIs).
  - Enable the Micro Traces for Routing Rules and "Thread (11) and Ports(13)" for Arbiter on Cisco Unity Connection Serviceability and check the logs for any errors or issues.
  - Check the phone system configuration like phone system, port groups, ports and SIP security profile for Unity Connection. You can check the following:
    - Verify that the port number specified in SIP Trunk profile on Cisco Unified Communications Manager and the Port Group on Unity Connection are same.
    - Verify that SIP Trunk Security Profile on Cisco Unified Communications Manager has the correct incoming port number.
    - Verify the Cisco Unified Communications Manager IP address or hostname specified in port group on Unity Connection.
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# Troubleshooting Problems with Migration

See the following sections:

## "Mailbox could not be loaded" Error Shows Up

If the error "Mailbox could not be loaded" shows up for one or more subscribers on Web Inbox after migrating data from a multi-tenant Unity Connection to another multi-tenant Unity Connection, do the following:

Check if the setting required for mailbox access may be lost during migration. To enable it back, do the following:

- You need the object ID of the class of service for each subscriber and run the following GET request to get the class of service object ID:

`https://<connection-server>/vmrest/users?query=(Alias%20is%20<UserAlias>`

2. Send a PUT request to the URI below to enable the setting:

`https://<connection-server>/vmrest/coses/<CosObjectId>`

## SMTP Proxy Address Not Updated on Unity Connection for One or More Subscribers After Migration

1. Look for the errors or warnings in the log files after migration at the following location:  
`<COBRASInstallationDirectory>/logs`
2. Check whether any subscriber has the same SMTP proxy address by sending a GET request to the URI:  
`https://<connection-server>/vmrest/smtpproxyaddresses?query=(SmtpAddress%20is%20<SmtpProxyAddress>)`  
Here, `<SmtpProxyAddress>` is the field for which the update failed.
3. Run the HTTP GET request below to get the SMTP Proxy addresses URI for the subscriber(s):  
`https://<connection-server>/vmrest/users?query=(ObjectId%20is%20<UserObjectId>)`
4. Perform an HTTP POST operation on the URI to create the SMTP proxy address and associate it with the object ID of the user:  
`https://<connection-server>/vmrest/smtpproxyaddresses`

## Hearing a Wrong Post Greeting Recording for Users Belonging to a Tenant

If you are hearing a wrong post greeting recording for users belonging to a tenant, do the following:

1. Check if the post greeting recording with the same name already exists in the Unity Connection.
2. Look for the errors or warnings in the log files after migration at the following location:  
`<COBRASInstallationDirectory>/logs`
3. Administrator can pick the missing recording from the backup of the destination Unity Connection, or else re-recording needs to be done.

## Getting Incorrect Time for Incoming or Outgoing Messages

In COBRAS migration, for any subscriber if timezone in the source Unity Connection is set to system default timezone then after migration in the destination Unity Connection, it would be set to the timezone that the tenant was created with.

To set it right, do the following:

1. Get the list of users belonging to the tenant using the URI:  
`https://<connection-server>/vmrest/users?query=(Alias%20is%20<UserAlias>)`
2. Send an HTTP PUT request to the following URI in order to set the time zone for the user to system default time zone:  
`https://<connection-server>/vmrest/users/<UserObjectId>`

## Get Incorrect Language for the Incoming or Outgoing Users

In COBRAS migration, for any subscriber if language in the source Unity Connection is set to system default language then after migration, in the destination Unity Connection, it would be set to the language that the tenant was created with.

To set it right, do the following:

1. Get the list of users belonging to the tenant using the URI:  
`https://<connection-server>/vmrest/users?query=(Alias%20is%20<UserAlias>)`
2. Send an HTTP PUT request to the following URI in order to set the timezone for the user to system default timezone:  
`https://<connection-server>/vmrest/users/<UserObjectId>`

