Steps to setup Consortia env

Tenants topology
Deployment steps

Create central and institutional tenants

To perform multi tenancy consortia setup lets create 3 tenants with ids: consortium, university, college

Tenant creation

For tenants creation the standard okapi tenant creating endpoint should be used: POST //proxy/tenants

We need to create new host with UI only for the central tenant.
System variables used for modules setup

<table>
<thead>
<tr>
<th>Module</th>
<th>System param (declared in JAVA_OPTS)</th>
<th>Related ticket for Kitfox</th>
</tr>
</thead>
<tbody>
<tr>
<td>mod-authtoken</td>
<td>allow.cross.tenant.requests=true</td>
<td>RANCHER-903 - Add system property 'allow.cross.tenant.requests=true' for mod-authtoken consortia setups</td>
</tr>
</tbody>
</table>

Enable modules on tenants

We should follow the standard procedure of enabling tenants from install.json and enable all desired modules except one UI module folio_consortia-settings that should be enabled only in the consortium central tenant.

Differences between central and institutional tenants

Module folio_consortia-settings should be enabled only in consortium central tenant.

Configure tenants

Reference data should be created on both central and institutional tenants, sample data - only on central consortium tenant. Reset password link, SMTP for sending emails should be configured on all tenants. Separate admin users in each tenant can be created to apply all this configuration.

Create admin user in the central tenant

For Consortia setup it is required to create admin user in the central consortium tenant. For other tenants shadow admin users with required set of permissions will be created automatically during Configure consortium tenants step.

Endpoint to create admin user

For user creation the standard endpoint should be used from mod-users: POST /users

Configure consortium tenants

Tenant context

All operation to configure consortium tenants should be executed in context of the central tenant, meaning with x-okapi-header = 'consortium'

Create consortium record

Request to create consortium record:

```json
POST /consortia HTTP/1.1
X-Okapi-Tenant: consortium
X-Okapi-Token: <JWT>
Content-Type: application/json

{  "id": "a617d446-4c00-4f8f-bcd4-5beacbcceef67",
  "name": "Mobius"
}
```

Create consortium tenants

Actions performed under the hood of invoicing POST /consortia/{consortiumId}/tenants:
• Store central tenant id in the consortia_settings table of the desired tenant
• Perform primary affiliation creating for all existing users asynchronously
• Invoke /user-tenant to store dummy user

Add central tenant to the consortium

Request to create central consortium tenant:

```
POST /consortia/df874ff4-c405-11ed-afa1-0242ac120002/tenants HTTP/1.1
X-Okapi-Tenant: consortium
X-Okapi-Token: <JWT>
Content-Type: application/json

{
    "id": "consortium",
    "name": "Central office",
    "code": "MCO",
    "isCentral": true
}
```
1. Add central tenant to consortium

**Central tenant schema**

2. Check consortium exists or throw an error

3. Check tenant not yet added or throw an error

4. Check if don’t have a central tenant or throw an error

5. Save central tenant in tenant table

6. Login by system user and use his token for all subsequent requests

**System user makes all subsequent calls**

7. Save central tenant id in consortia-configuration table

**Create primary affiliation for existed users(async)**

8. Retrieve all existed users from central tenant

9. Check if primary user affiliation already exists in user_tenant table

10. Save primary user affiliation in user_tenant table

11. Send CONSORTIUM_PRIMARY_AFFILIATION_CREATED event

12. Skipping creating primary affiliation for this user

13. Status: Created
Add institutional tenants to the consortium

New request param adminUserId added

Pay attention that new request parameter adminUserId has been added. It is used to create shadow admin user in the desired tenant with predefined set of permissions. It should be adminUserId for admin user from the central Tenant.
Request to create University tenant:

```
POST /consortia/df874ff4-c405-1led-afal-0242ac120002/tenants?adminUserId=b20c4397-ad56-479f-891a-30a5a471f24b
HTTP/1.1
X-Okapi-Tenant: consortium
X-Okapi-Token: <JWT>
Content-Type: application/json

{
    "id": "university",
    "name": "University",
    "code": "UNI",
    "isCentral": false
}
```

Request to create College tenant:

```
POST /consortia/df874ff4-c405-1led-afal-0242ac120002/tenants?adminUserId=b20c4397-ad56-479f-891a-30a5a471f24b
HTTP/1.1
X-Okapi-Tenant: consortium
X-Okapi-Token: <JWT>
Content-Type: application/json

{
    "id": "college",
    "name": "College",
    "code": "COL",
    "isCentral": false
}
```
PlantUML

@startuml
!pragma teoz true
!theme cerulean
autonumber

1. Add member tenant to consortium

2. Check consortium exists or throw an error

3. Check tenant not yet added or throw an error

4. Save member tenant in tenant table

5. Get central tenant id

6. Fetch admin user to prepare shadow user

7. Save shadow admin association in user_tenant table

8. Login by system user in member tenant and use his token for all subsequent requests

9. Save central tenant id in consortium-configuration table

10. Create dummy user_tenant record

11. Create shadow admin

12. Add predefined set of permissions to shadow admin user

13. Retrieve all existed users from this member tenant

14. Check if primary user affiliation already exists in user_tenant table

15. Save primary user affiliation in user_tenant table

16. Send CONSORTIUM_PRIMARY_AFFILIATION_CREATED event

18. Status: Created

@enduml
actor "user" as user
participant "mod-consortia" as mc
database "mod-consortia DB" as mc_db
participant "mod-users" as mu
participant "mod-login" as ml
participant "mod-permissions" as mp

user -> mc: Add member tenant to consortium
activate mc

group #F3F0E1 Central tenant schema
mc -> mc: Check consortium exists or throw an error
mc -> mc: Check tenant not yet added or throw an error
mc -> mc_db: Save member tenant in tenant table

group #E7BFF5 Create shadow admin user_tenant association in central tenant
mc -> mc_db: Get central tenant id
mc -> mu: Fetch admin user to prepare shadow user
mc -> mc_db: Save shadow admin association in user_tenant table

end

end

group #DBE1F1 Member tenant schema
mc -> ml: Login by system user in member tenant and use his token for all subsequent requests

group System user makes all subsequent calls
note left
System user permissions:
  consortia.consortia-configuration.item.post
  users.collection.get
  users.item.get
  users.item.post
  users.item.put
  perms.users.item.put
  perms.users.item.post
  perms.users.item.delete
  perms.users.assign.immutable
  perms.users.assign.mutable
  perms.users.get
  user-tenants.item.post
end note

mc -> mc_db: Save central tenant id in consortia-configuration table
mc -> mu: Create dummy user_tenant record

group #E7BFF5 Create shadow admin user with permissions in member tenant
mc -> mu: Create shadow admin user
mc -> mp: Add predefined set of permissions to shadow admin user
note left
Shadow admin user permissions:
  ui-users.editperms
end note

end

group #eeeee4 Create primary affiliation for existed users(async)
mc -> mu: Retrieve all existed users from this member tenant
loop users size count
  mc -> mc_db: Check if primary user affiliation already exists in user_tenant table
  alt #E8F3E1 User was not affiliated yet
    mc -> mc_db: Save primary user affiliation in user_tenant table
    mc -> mu: Send CONSORTIUM_PRIMARY_AFFILIATION_CREATED event
  else #F3E1E2 User was already affiliated previously
    mc -> mc: Skipping creating primary affiliation for this user
end

mc --> user: Status: Created
end
## Issues found during consortia env setup

<table>
<thead>
<tr>
<th>Issue description</th>
<th>Related tickets</th>
</tr>
</thead>
<tbody>
<tr>
<td>Simultaneous adding tenants to consortia can cause concurrent issues</td>
<td><a href="#">MODCON-73</a> - Test simultaneous create tenant requests and apply improvements found after automated pipeline work</td>
</tr>
<tr>
<td></td>
<td><a href="#">RANCHER-893</a> - Remove timeouts between adding tenants to the consortium in automation job</td>
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</table>