

Penn organizational hierarchy - part 2

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[This is continued from part 1](#)

Rollup orgs

- Now we need a meta view which has information about the rollup group: note the top two levels are filtered out

```
CREATE OR REPLACE FORCE VIEW ORG_LOADER_ROLLUP_META_V
(
  GROUP_NAME,
  GROUP_DISPLAY_NAME,
  GROUP_DESCRIPTION,
  READERS,
  VIEWERS,
  ORG_ID,
  GROUP_OVERALL_NAME,
  PARENT_ID
)
AS
  SELECT DISTINCT
    'penn:community:employee:org:'
    || olv.org_name
    || ':'
    || olv.org_name
    || '_rolluporg_systemOfRecord'
    AS group_name,
    'penn:community:employee:org:'
    || olv.org_name
    || ' - '
    || olv.ORG_DISPLAY_NAME
    || ':'
    || olv.org_name
    || ' - '
    || olv.ORG_DISPLAY_NAME
    || ' system of record'
    AS group_display_name,
    'Members of '
    || olv.org_name
    || ' and all groups underneath the hierarchy'
    AS group_description,
    'penn:community:employee:orgSecurity:orgReaders' AS readers,
    'penn:community:employee:orgSecurity:orgViewers' AS viewers,
    olv.org_name AS org_id,
    'penn:community:employee:org:'
    || olv.org_name
    || ':'
    || olv.org_name
    || '_rolluporg'
    AS group_overall_name,
    olv.PARENT_ID
  FROM org_list_v olv
  WHERE EXISTS
    (SELECT OLV2.ORG_NAME
     FROM org_list_v olv2
     WHERE OLV2.PARENT_ID = OLV.ORG_NAME)
    AND olv.PAYROLL_FLAG = 'N'
    AND olv.ORG_NAME NOT IN ('TOPU', 'UNIV', 'NOTU')
  ORDER BY 2;
```

- This has data which looks like this:

GROUP_NAME	GROUP_DISPLAY_NAME	GROUP_DESCRIPTION	READERS	VIEWERS	ORG_ID	GROUP_OVERALL_NAME	PARENT_ID
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penn:community:employee:org:00XX:00XX_rolluporg_systemOfRecord	penn:community:employee:org:00XX - General University Parent:00XX - General University Parent system of record	Members of 00XX and all groups underneath the hierarchy	penn:community:employee:orgSecurity:orgReaders	penn:community:employee:orgSecurity:orgViewers	00XX	penn:community:employee:org:00XX:00XX_rolluporg	UOTH
penn:community:employee:org:02XX:02XX_rolluporg_systemOfRecord	penn:community:employee:org:02XX - School of Arts and Sciences Parent:02XX - School of Arts and Sciences Parent system of record	Members of 02XX and all groups underneath the hierarchy	penn:community:employee:orgSecurity:orgReaders	penn:community:employee:orgSecurity:orgViewers	02XX	penn:community:employee:org:02XX:02XX_rolluporg	USCH

- Now the rollups, make a view which assigns the rollup. Note this is based on the meta view, so it only includes groups in the meta view

```
CREATE OR REPLACE FORCE VIEW ORG_LOADER_ROLLUP_V
(
  GROUP_NAME,
  MEMBER_GROUP_NAME
)
BEQUEATH DEFINER
AS
(SELECT DISTINCT
  rollup_parent.GROUP_NAME AS group_name,
  /* records which are rollups directly under the rollup */
  rollup_child.GROUP_OVERALL_NAME AS subject_identifier
  FROM ORG_LOADER_ROLLUP_META_V rollup_parent,
  ORG_LOADER_ROLLUP_META_V rollup_child
  WHERE rollup_child.PARENT_ID = rollup_parent.ORG_ID)
UNION
/* payroll orgs (which hold people) directly under the rollup */
(SELECT DISTINCT
  rollup_parent.GROUP_NAME,
  'penn:community:employee:org:'
  || olv_child.ORG_NAME
  || ':'
  || olv_child.ORG_NAME
  || '_personorg'
  AS subject_identifier
  FROM ORG_LOADER_ROLLUP_META_V rollup_parent, org_list_v olv_child
  WHERE olv_child.PARENT_ID = rollup_parent.org_id
  AND olv_child.PAYROLL_FLAG = 'Y');
```

- The data for this view looks like this

GROUP_NAME	MEMBER_GROUP_NAME
penn:community:employee:org:00XX:00XX_rolluporg_systemOfRecord	penn:community:employee:org:0001:0001_personorg
penn:community:employee:org:00XX:00XX_rolluporg_systemOfRecord	penn:community:employee:org:0007:0007_personorg
penn:community:employee:org:02XX:02XX_rolluporg_systemOfRecord	penn:community:employee:org:BI0B:BI0B_rolluporg

- Use the rollup view, join to group id's

```
CREATE OR REPLACE FORCE VIEW ORG_LOADER_ROLLUP2_V
(
  GROUP_NAME,
  SUBJECT_ID,
  SUBJECT_SOURCE_ID,
  SUBJECT_GROUP_NAME
)
AS
SELECT olrv.GROUP_NAME group_name,
  gg.ID AS subject_id,
  'g:gsa' AS SUBJECT_SOURCE_ID,
  olrv.MEMBER_GROUP_NAME subject_group_name
  FROM org_loader_rollup_v olrv, grouper_groups gg
  WHERE gg.NAME = olrv.MEMBER_GROUP_NAME;
COMMENT ON TABLE ORG_LOADER_ROLLUP2_V IS 'shows rollup group assignments';
```

- The data from this view looks like

GROUP_NAME	SUBJECT_ID	SUBJECT_SOURCE_ID	SUBJECT_GROUP_NAME
penn:community:employee:org:TOPU:UNIV:UADM:UADM_rolluporg_systemOfRecord	e5c4834ca09e45f8b635422cc1b6d4c1	g:gsa	penn:community:employee:org:TOPU:UNIV:UADM:88XX:88XX_personorg
penn:community:employee:org:TOPU:NOTU:HCAG:99XX:99XX_rolluporg_systemOfRecord	0dd6217005be4b2996574fbcac0c1eec	g:gsa	penn:community:employee:org:TOPU:NOTU:HCAG:99XX:AG13:AG13_rolluporg
penn:community:employee:org:TOPU:NOTU:HCAG:99XX:99XX_rolluporg_systemOfRecord	a2af451090644ed4b1d1d0ed57adf5d4	g:gsa	penn:community:employee:org:TOPU:NOTU:HCAG:99XX:AG98:AG98_rolluporg
penn:community:employee:org:TOPU:UNIV:UADM:UADM_rolluporg_systemOfRecord	2fca9dbef7144c198b50bf48163d4cd4	g:gsa	penn:community:employee:org:TOPU:UNIV:UADM:90XX:90XX_rolluporg

- Create the config group for the rollups, and execute the loader job

```

gsh 4% rollupGroup = addGroup("penn:community:employee", "orgRollupConfig", "orgRollupConfig");
group: name='penn:community:employee:orgRollupConfig' displayName='penn:community:employee:orgRollupConfig'
      uuid='8b329babf720413d81f5004fb3729c02'
gsh 6% groupAddType("penn:community:employee:orgRollupConfig", "grouperLoader");
true
gsh 7% setGroupAttr("penn:community:employee:orgRollupConfig", "grouperLoaderDbName", "grouper");
true
gsh 8% setGroupAttr("penn:community:employee:orgRollupConfig", "grouperLoaderQuartzCron", "0 06 7 * * ? ");
true
gsh 9% setGroupAttr("penn:community:employee:orgRollupConfig", "grouperLoaderQuery", "select GROUP_NAME,
SUBJECT_ID, SUBJECT_SOURCE_ID from ORG_LOADER_ROLLUP2_V");
true
gsh 10% setGroupAttr("penn:community:employee:orgRollupConfig", "grouperLoaderScheduleType", "CRON");
true
gsh 12% setGroupAttr("penn:community:employee:orgRollupConfig", "grouperLoaderType", "SQL_GROUP_LIST");
true
gsh 13% setGroupAttr("penn:community:employee:orgRollupConfig", "grouperLoaderGroupQuery", "select group_name,
group_display_name, group_description, readers, viewers from org_loader_rollup_meta_v");
true
gsh 14% setGroupAttr("penn:community:employee:orgRollupConfig", "grouperLoaderGroupsLike", "penn:community:
employee:org:%_rolluporg_systemOfRecord");
true
gsh 15% setGroupAttr("penn:community:employee:orgRollupConfig", "grouperLoaderGroupTypes", "addIncludeExclude");
true
gsh 18% rollupGroup = GroupFinder.findByName(grouperSession, "penn:community:employee:orgRollupConfig");
group: name='penn:community:employee:orgRollupConfig' displayName='penn:community:employee:orgRollupConfig'
      uuid='8b329babf720413d81f5004fb3729c02'
gsh 19% loaderRunOneJob(rollupGroup);

```

- There are 1461 rollup orgs, 407k memberships. Here is a screen of the rollups orgs

Members of UADM and all groups underneath the hierarchy

Name:	UADM - Administrative Service Centers system of record
Path:	penn:community.employee.org:UADM - Administrative Service Centers:UADM - Administrative Service Centers system of record
ID path:	penn:community.employee.org:UADM:UADM_rolluporg_systemOfRecord
Alternate ID path:	
ID:	UADM_rolluporg_systemOfRecord
Created:	Sun Mar 3 9:38:07 AM EST 2013
Creator:	 GrouperSysAdmin
Last edited:	Sun Mar 3 9:38:07 AM EST 2013
Last edited by:	 GrouperSysAdmin
Type:	Group
Privileges assigned to everyone:	
Composite owner:	This group is not a composite owner
Composite factor of other groups:	This group is not a direct composite factor of any other groups
ID index:	129054
UUID:	8b14f6d6cda947e69f065828611708d2

Less ^

- Members
- Privileges
- More ▾

The following table lists all entities which are members of this group.

Filter for:

Has direct membership ▾

Member name

Apply filter

Reset

Remove selected members		
☐ Entity name ▾	Membership	
☐  81XX - Presidents Center Parent	Direct	Actions ▾
☐  83XX - Provosts Center Parent	Direct	Actions ▾
☐  88XX - Medical Center Parent	Direct	Actions ▾

- Here are all members in a rollup group

Home > Root > penn > community > employee > org > UADM - Administrative Service Centers > UADM - Administrative Service Centers system of record



UADM - Administrative Service Centers system of record

+ Add members

More actions ▾

Members of UADM and all groups underneath the hierarchy

More ▾

Members

Privileges

More ▾

The following table lists all entities which are members of this group.

Filter for: All members ▾

Member name

Apply filter

Reset

Remove selected members

☐ Entity name ▾	Membership	
☐  [REDACTED]	Indirect	Actions ▾
☐  [REDACTED]	Indirect	Actions ▾
☐  [REDACTED]	Indirect	Actions ▾
☐  [REDACTED] ald	Indirect	Actions ▾
☐  81XX - Presidents Center Parent	Direct	Actions ▾
☐  83XX - Provosts Center Parent	Direct	Actions ▾
☐  88XX - Medical Center Parent	Direct	Actions ▾
☐  90XX - Development and Alumni Relations Parent	Direct	Actions ▾
☐  EVPP - Executive Vice President Parent	Direct	Actions ▾

Centers (can be high level orgs or across the hierarchy)

- Create a view of the list of centers

```
CREATE OR REPLACE FORCE VIEW ORG_CENTER_LIST_V
(
  CENTER_CODE,
  CENTER_NAME
)
AS
  SELECT DISTINCT olv.CENTER_CODE, olv.CENTER_NAME
    FROM org_list_v olv
   WHERE center_code IS NOT NULL;
COMMENT ON TABLE ORG_CENTER_LIST_V IS 'list of centers to make groups for';
```

- This data looks like

CENTER_CODE	CENTER_NAME
26	University Museum
90	Development and Alumni Relations
87	Division of Finance

- Make a meta view about all the "center" groups

```

CREATE OR REPLACE FORCE VIEW ORG_CENTER_META_V
(
    GROUP_OVERALL_NAME,
    GROUP_NAME,
    GROUP_DISPLAY_NAME,
    GROUP_DESCRIPTION,
    READERS,
    VIEWERS,
    CENTER_CODE,
    CENTER_NAME
)
AS
SELECT      'penn:community:employee:center:'
           || oclv.CENTER_CODE
           || '_center:'
           || oclv.CENTER_CODE
           || '_center'
           AS group_overall_name,
           'penn:community:employee:center:'
           || oclv.CENTER_CODE
           || '_center:'
           || oclv.CENTER_CODE
           || '_center_systemOfRecord'
           AS group_name,
           'penn:community:employee:center:'
           || oclv.CENTER_CODE
           || ' center '
           || oclv.CENTER_NAME
           || ':'
           || oclv.CENTER_CODE
           || ' center '
           || oclv.CENTER_NAME
           || ' system of record'
           AS group_display_name,
           'Center '
           || oclv.CENTER_CODE
           || ' '
           || oclv.CENTER_NAME
           || ' is a rollup of orgs and their includes/excludes'
           AS group_description,
           'penn:community:employee:orgSecurity:orgReaders' AS readers,
           'penn:community:employee:orgSecurity:orgViewers' AS viewers,
           center_code,
           center_name
FROM org_center_list_v oclv;
COMMENT ON TABLE ORG_CENTER_META_V IS 'list of groups managed by the center loader job';

```

- This data looks like this
- Make a view of which children (org nodes) are in each center (direct children not grandchildren which will be effective members anyways)

```

CREATE OR REPLACE VIEW ORG_CENTER_ROLLUP_V
(GROUP_NAME, MEMBER_GROUP_NAME)
AS
(select distinct ocmv.GROUP_NAME as group_name,
/* records which are rollups directly under the rollup */
rollup_child.GROUP_OVERALL_NAME as subject_identifier
from org_center_meta_v ocmv, ORG_LOADER_ROLLUP_META_V rollup_child, org_list_v olv_child
where olv_child.CENTER_CODE_ASSIGN = ocmv.CENTER_CODE and olv_child.ORG_NAME = rollup_child.ORG_ID )
union all
/* payroll orgs (which hold people) directly under the rollup */
(select distinct ocmv.GROUP_NAME ,
olpmv.GROUP_NAME as subject_identifier
from org_center_meta_v ocmv, org_list_v olv_child, org_loader_person_meta_v olpmv
where olv_child.CENTER_CODE_ASSIGN = ocmv.CENTER_CODE and olv_child.ORG_NAME = olpmv.ORG_ID)

```

- This data looks like this

GROUP_NAME	MEMBER_GROUP_NAME
penn:community:employee:center:86_center:86_center_systemOfRecord	penn:community:employee:org:86XX:86XX_rolluporg
penn:community:employee:center:98_center:98_center_systemOfRecord	penn:community:employee:org:98XX:98XX_rolluporg
penn:community:employee:center:32_center:32_center_systemOfRecord	penn:community:employee:org:32XX:32XX_rolluporg
penn:community:employee:center:02_center:02_center_systemOfRecord	penn:community:employee:org:0120:0120_personorg

- Join this with the grouper registry to get the group ids

```
CREATE OR REPLACE VIEW ORG_CENTER_ROLLUP2_V
(GROUP_NAME, SUBJECT_ID, SUBJECT_SOURCE_ID, SUBJECT_GROUP_NAME)
AS
select ocrv.GROUP_NAME group_name, ga.GROUP_ID as subject_id, 'g:gsa' as SUBJECT_SOURCE_ID,
ocrv.MEMBER_GROUP_NAME subject_group_name
from org_center_rollup_v ocrv, grouper_attributes ga, grouper_fields gf
where gf.NAME = 'name' AND gf.ID = ga.field_id and ga.VALUE = ocrv.MEMBER_GROUP_NAME
```

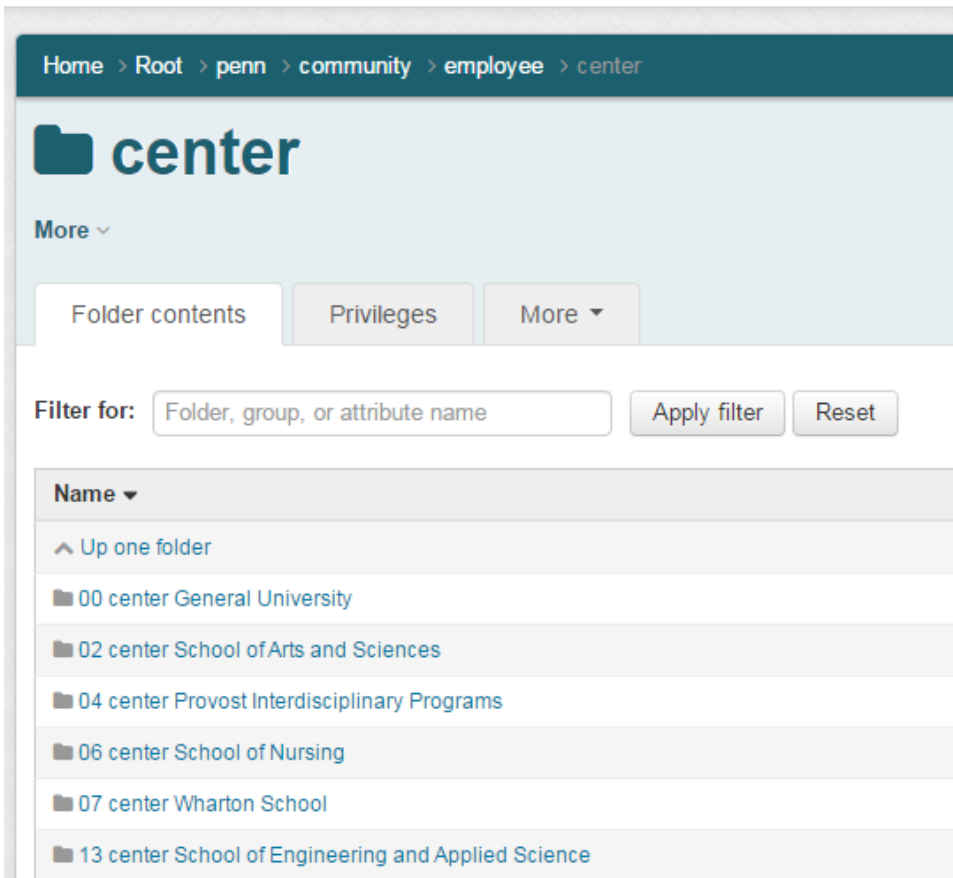
- This data looks like this

GROUP_OVERALL_NAME	GROUP_NAME	GROUP_DISPLAY_NAME	GROUP_DESCRIPTION	READERS	VIEWERS	CENTER_CODE	CE
penn:community:employee:center:22_center:22_center	penn:community:employee:center:22_center:22_center_systemOfRecord	penn:community:employee:center:22_center Domestic Subsidiaries:22 center Domestic Subsidiaries system of record	Center 22 Domestic Subsidiaries is a rollup of orgs and their includes /excludes	penn:community:employee:orgSecurity:orgReaders	penn:community:employee:orgSecurity:orgViewers	22	Domestic Subsidiaries

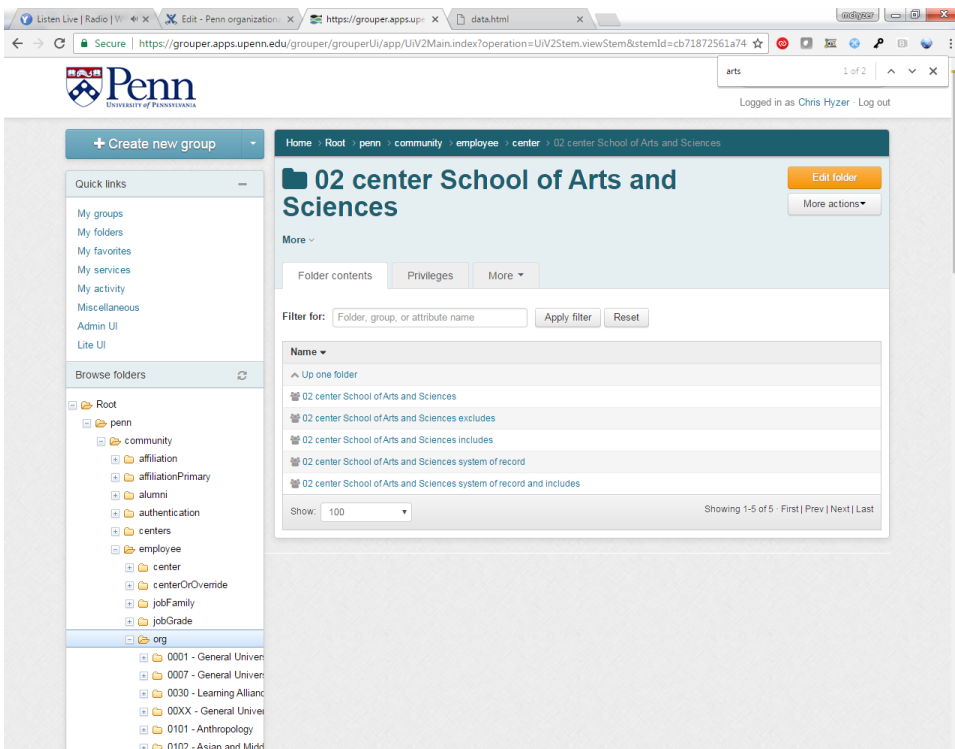
- gsh 4% centerGroup = addGroup("penn:community:employee", "centerRollupConfig", "centerRollupConfig");
group: name='penn:community:employee:centerRollupConfig' displayName='penn:community:employee:centerRollupConfig' uuid='8b329babf720413d81f5004fb3729c02'
gsh 6% groupAddType("penn:community:employee:centerRollupConfig", "grouperLoader");
true
gsh 7% setGroupAttr("penn:community:employee:centerRollupConfig", "grouperLoaderDbName", "grouper");
true
gsh 8% setGroupAttr("penn:community:employee:centerRollupConfig", "grouperLoaderQuartzCron", "0 36 7 * *
? ");
true
gsh 9% setGroupAttr("penn:community:employee:centerRollupConfig", "grouperLoaderQuery", "select
GROUP_NAME, SUBJECT_ID, SUBJECT_SOURCE_ID from ORG_CENTER_ROLLUP2_V");
true
gsh 10% setGroupAttr("penn:community:employee:centerRollupConfig", "grouperLoaderScheduleType", "CRON");
true
gsh 12% setGroupAttr("penn:community:employee:centerRollupConfig", "grouperLoaderType",
"SQL_GROUP_LIST");
true
gsh 13% setGroupAttr("penn:community:employee:centerRollupConfig", "grouperLoaderGroupQuery", "select
group_name, group_display_name, group_description, readers, viewers from org_center_meta_v");
true
gsh 14% setGroupAttr("penn:community:employee:centerRollupConfig", "grouperLoaderGroupsLike", "penn:
community:employee:center:%_center_systemOfRecord");
true
gsh 15% setGroupAttr("penn:community:employee:centerRollupConfig", "grouperLoaderGroupTypes",
"addIncludeExclude");
true
gsh 18% centerGroup = GroupFinder.findByName(grouperSession, "penn:community:employee:
centerRollupConfig");
group: name='penn:community:employee:centerRollupConfig' displayName='penn:community:employee:
centerRollupConfig' uuid='8b329babf720413d81f5004fb3729c02'
gsh 19% loaderRunOneJob(centerGroup);

Add this config group

- This created 41 centers, with 91k membership. Here are the centers



- Here is a look at one center



- Here are all members of a center

Center 02: School of Arts and Sciences is a rollout of orgs and their includes/excludes

Name:	02 center School of Arts and Sciences system of record
Path:	penn:community:employee:center:02 center School of Arts and Sciences:02 center School of Arts and Sciences system of record
ID path:	penn:community:employee:center:02_center:02_center_systemOfRecord
Alternate ID path:	
ID:	02_center_systemOfRecord
Created:	Thu May 21 2:42:26 AM EDT 2009
Creator:	GrouperSysAdmin
Last edited:	Fri Jul 9 6:48:10 AM EDT 2010
Last edited by:	GrouperSysAdmin
Type:	Group
Privileges assigned to everyone:	
Composite owner:	This group is not a composite owner
Composite factor of other groups:	This group is not a direct composite factor of any other groups
ID index:	106958
UUID:	714a77e8a3fb401c90a6c58e80044086

Less ^

Members

Privileges

More ▾

The following table lists all entities which are members of this group.

Filter for:

All members ▾

Member name

Apply filter

Reset

Remove selected members

☐ Entity name ▾	Membership	
☐ 0118 - Physics and Astronomy	Direct	Actions ▾
☐ 0120 - Psychology	Direct	Actions ▾
☐ 02XX - School of Arts and Sciences Parent	Direct	Actions ▾
☐ [redacted]	Indirect	Actions ▾

Contractors and one-offs

We dont have groupings of contractors in our payroll system, but we can set a flag in "Penn Community" our person database. So lets organize a way to automatically make groups based on flags. Lets make a table which identifies the flags we are looking for, and which group extension

```
CREATE TABLE ORG_SPONSOR_GROUP (  
  GROUP_EXTENSION VARCHAR2(128 CHAR) NOT NULL,  
  LIKE_STRING_UPPER VARCHAR2(128 CHAR)  
)
```

* Currently we only have one row

```
GROUP_EXTENSION LIKE_STRING_UPPER  
96XX_consultants 96XX
```

* Lets make the meta view that describes the groups managed by this loader

```
CREATE OR REPLACE VIEW ORG_SPONSOR_META_V  
(GROUP_NAME, GROUP_DISPLAY_NAME, GROUP_DESCRIPTION, READERS, VIEWERS,  
GROUP_OVERALL_NAME, GROUP_EXTENSION)  
AS
```

```

select 'penn:community:employee:sponsororg:' || osg.GROUP_EXTENSION || '_sponsororg:' || osg.GROUP_EXTENSION ||
'_sponsororg_systemOfRecord' as group_name,
'penn:community:employee:sponsororg:' || osg.GROUP_EXTENSION || '_sponsororg:' || osg.GROUP_EXTENSION ||
'_sponsororg_system of record' as group_display_name,
'people in penn community with a substring of ' || osg.LIKE_STRING_UPPER || ' in their sponsor_org field
somewhere' as group_description,
'penn:community:employee:orgSecurity:orgReaders' as readers,
'penn:community:employee:orgSecurity:orgViewers' as viewers,
'penn:community:employee:sponsororg:' || osg.GROUP_EXTENSION || '_sponsororg:' || osg.GROUP_EXTENSION ||
'_sponsororg' as group_overall_name,
osg.GROUP_EXTENSION
from org_sponsor_group osg

```

* The data from that view looks like this

```

GROUP_NAME GROUP_DISPLAY_NAME GROUP_DESCRIPTION READERS VIEWERS GROUP_OVERALL_NAME GROUP_EXTENSION
penn:community:employee:sponsororg:96XX_consultants_sponsororg:96XX_consultants_sponsororg_systemOfRecord penn:
community:employee:sponsororg:96XX_consultants_sponsororg:96XX_consultants_sponsororg system of record people
in penn community with a substring of 96XX in their sponsor_org field somewhere penn:community:employee:
orgSecurity:orgReaders penn:community:employee:orgSecurity:orgViewers penn:community:employee:sponsororg:
96XX_consultants_sponsororg:96XX_consultants_sponsororg 96XX_consultants

```

* Make an assignment view which links up people with their one-off group

```

CREATE OR REPLACE VIEW ORG_SPONSOR_LIST_V
(GROUP_NAME, SUBJECT_ID)
AS
(Select distinct osmv.GROUP_NAME as group_name, sav.v_penn_id as subject_id
from ORG_SPONSOR_group osg, comadmin.ssn4_affiliation_view sav, ORG_SPONSOR_META_V osmv
Where sav.v_active_code = 'A'
and upper(sav.v_sponsor_org) like '%' || osg.LIKE_STRING_UPPER || '%'
and osmv.GROUP_EXTENSION = osg.GROUP_EXTENSION)

```

* The data from that view looks like this

```

GROUP_NAME SUBJECT_ID
penn:community:employee:sponsororg:96XX_consultants_sponsororg:96XX_consultants_sponsororg_systemOfRecord
10128438
penn:community:employee:sponsororg:96XX_consultants_sponsororg:96XX_consultants_sponsororg_systemOfRecord
68214103
penn:community:employee:sponsororg:96XX_consultants_sponsororg:96XX_consultants_sponsororg_systemOfRecord
10135159
penn:community:employee:sponsororg:96XX_consultants_sponsororg:96XX_consultants_sponsororg_systemOfRecord
10114304

```

* Create the config group, and run the loader

```

gsh 4% sponsorGroup = addGroup("penn:community:employee", "orgSponsorConfig", "orgSponsorConfig");
group: name='penn:community:employee:orgSponsorConfig' displayName='penn:community:employee:orgSponsorConfig'
uuid='8b329babf720413d81f5004fb3729c02'
gsh 6% groupAddType("penn:community:employee:orgSponsorConfig", "grouperLoader");
true
gsh 7% setGroupAttr("penn:community:employee:orgSponsorConfig", "grouperLoaderDbName", "grouper");
true
gsh 8% setGroupAttr("penn:community:employee:orgSponsorConfig", "grouperLoaderQuartzCron", "0 16 7 * * ? ");
true
gsh 9% setGroupAttr("penn:community:employee:orgSponsorConfig", "grouperLoaderQuery", "select GROUP_NAME,
SUBJECT_ID from ORG_SPONSOR_LIST_V");
true
gsh 10% setGroupAttr("penn:community:employee:orgSponsorConfig", "grouperLoaderScheduleType", "CRON");
true
gsh 12% setGroupAttr("penn:community:employee:orgSponsorConfig", "grouperLoaderType", "SQL_GROUP_LIST");
true
gsh 13% setGroupAttr("penn:community:employee:orgSponsorConfig", "grouperLoaderGroupQuery", "select group_name,
group_display_name, group_description, readers, viewers from org_sponsor_meta_v");

```

```

true
gsh 14% setGroupAttr("penn:community:employee:orgSponsorConfig", "grouperLoaderGroupsLike", "penn:community:
employee:sponsororg:%_sponsororg_systemOfRecord");
true
gsh 15% setGroupAttr("penn:community:employee:orgSponsorConfig", "grouperLoaderGroupTypes",
"addIncludeExclude");
true
gsh 18% sponsorGroup = GroupFinder.findByName(grouperSession, "penn:community:employee:orgSponsorConfig");
group: name='penn:community:employee:orgSponsorConfig' displayName='penn:community:employee:orgSponsorConfig'
uuid='8b329babf720413d81f5004fb3729c02'
gsh 19% loaderRunOneJob(sponsorGroup);

```

- Here is an attribute based (sponsor) group

EXPLORE

Browse groups hierarchy ⓘ

You can look for groups throughout the hierarchy.
(You might not be able to see some groups if you lack appropriate privileges.)

Browse or list groups ⓘ

Current location is:

Root: penn: community: employee: sponsororg: 96XX_consultants_sponsororg

Showing 1-5 of 5 items

96XX_consultants_sponsororg

96XX_consultants_sponsororg excludes

96XX_consultants_sponsororg includes

96XX_consultants_sponsororg system of record

96XX_consultants_sponsororg system of record and includes

Search groups [Advanced groups search](#)

Search from

Root

Display results by

☒ Path
☐ Name
☐ ID_Path

Manage folders

- Here are the members of an attribute based sponsor group

EXPLORE

Members ?

Current location is: Root: penn: community: employee: sponsororg: 96XX_consultants_sponsororg: 96XX_consultants_sponsororg

Membership list

☐ Show DIRECT members of this group
☐ Show INDIRECT members of this group
☒ Show ALL members of this group (direct and indirect)
 Show members from

Change display

Showing 1-49 of 49 items
 Click an entity name to view entity details, or click a membership description to view/modify privileges.

- This is a composite group
 - penn:community:employee:sponsororg:96XX_consultants_sponsororg:96XX_consultants_sponsororg system of record and includes complement
 - penn:community:employee:sponsororg:96XX_consultants_sponsororg:96XX_consultants_sponsororg excludes
 - 96XX_consultants_sponsororg includes : is an indirect member
 - 96XX_consultants_sponsororg system of record : is an indirect member
 - (60) Persupload, Serv : is an indirect member
 - Web, Serv : is an indirect member
 - Web, Serv : is an indirect member
 - (57688) Web, Serv : is an indirect member
 - (1195) Web, Serv : is an indirect member
 - Web, Serv : is an indirect member
 - (b) Persupload, Serv : is an indirect member
 - (b) Serv : is an indirect member

Putting it all together

We need a group for all employees in Facilities and Real Estate Services. We need to add the VP (who is not in the Facilities org), and we need to add the contractors. I will add this in the org structure, so people can easily find it.

- Add the VP to the includes list of the org. Note, this means that for all purposes, additions are considered part of the org, and part of the center (since the org is part of the center)

Members ?

Current location is: Root: penn: community: employee: org: 96XX - Facilities and Real Estate Services Parent: 96XX - Facilities and Real Estate Services

Parent includes

Membership list

☐ Show DIRECT members of this group
☐ Show INDIRECT members of this group
☒ Show ALL members of this group (direct and indirect)
Change display

Enter search text to find members in the list: **Search for members**

First (ive) Staff - Facilities & Real Estate Services - Vice President : is a direct member

[Add members](#) [Create composite group](#) [Back to group summary](#)

- Now make a group which has the org group, and the consultants

EXPLORE

Browse groups hierarchy ?

You can look for groups throughout the hierarchy.
 (You might not be able to see some groups if you lack appropriate privileges.)

Browse or list groups ?

Current location is: Root: penn: community: employee: org: 96XX - Facilities and Real Estate Services Parent

- 96XX - Facilities and Real Estate Services Parent
- 96XX - Facilities and Real Estate Services Parent excludes
- 96XX - Facilities and Real Estate Services Parent includes
- 96XX - Facilities and Real Estate Services Parent system of record
- 96XX - Facilities and Real Estate Services Parent system of record and includes
- 96XX - FRES and consultants

Search groups [Advanced groups search](#)

Search groups

- Here are the two members

EXPLORE

Members

Current location is:
Root: penn: community: employee: org: 96XX - Facilities and Real Estate Services Parent:  96XX - FRES and consultants

Membership list

☒ Show DIRECT members of this group
☐ Show INDIRECT members of this group
☐ Show ALL members of this group (direct and indirect)

Change display

Enter search text to find members in the list: **Search for members**

First name  **Change sort attribute**

- ☐ 96XX - Facilities and Real Estate Services Parent is a direct member
- ☐ 96XX_consultants_sponsororg is a direct member

[Return to previous page](#)

Remove selected members **Remove all members**

- Here are all members
 -
 -

Current location is:
Root: penn: community: employee: org: UADM - Administrative Service Centers:  UADM - Administrative Service Centers system of record

Membership list

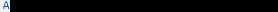
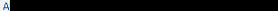
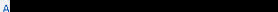
☐ Show DIRECT members of this group
☐ Show INDIRECT members of this group
☒ Show ALL members of this group (direct and indirect)

Show members from  Any source

Change display

Enter search text to find members in the list: **Search for members**

First name  **Change sort attribute**

- 78XX - Audit Compliance and Privacy Parent : is a direct member
- 79XX - Division of Public Safety Parent : is a direct member
- 81XX - Presidents Center Parent : is a direct member
- 83XX - Provosts Center Parent : is a direct member
- 87XX - Division of Finance Parent : is a direct member
- 88XX - Medical Center Parent : is a direct member
- 90XX - Development and Alumni Relations Parent : is a direct member
- 91XX - Information Systems and Computing Parent : is a direct member
- 92XX - Human Resources Parent : is a direct member
- 96XX - Facilities and Real Estate Services Parent : is a direct member
- 97XX - Facilities Services Parent : is a direct member
- 98XX - Executive Vice President Parent : is a direct member
- A -  - Inter For Undergrad Research And Fellowships - Assistant Director For Communication (also: 
- A -  - Univ Records Ctr - Records Asst : is an indirect member
- A -  - Penn Medicine Development And Alumni Relations - Administrative Assistant : is an indirect member
- A -  (active) Staff - Housekeeping - Custodian : is an indirect member

- Protect a web resource in apache by requiring members to be in this group (note: authnz_ldap apache module grabs all members of the group unless a patch is applied that Penn developed which is not yet public)

```
<Directory "[directory]">
CosignProtected on
AuthType Cosign
CosignRequireFactor UPENN.EDU
AuthzLDAPAuthoritative on
AuthLDAPCompareDNOnServer on
AuthLDAPBindPassword [password]
AuthLDAPBindDN uid=[service principal],ou=entities,dc=upenn,dc=edu
AuthLDAPLimitAttribute cn # custom attribute via local patch
AuthLDAPURL
ldaps://url.ldap.private/cn=penn:community:employee:org:96XX:96XX_andConsultants,ou=groups,dc=upenn,
dc=edu?hasMember
require ldap-dn cn=penn:community:employee:96XX:96XX_andConsultants,ou=groups,dc=upenn,dc=edu
</Directory>
```