

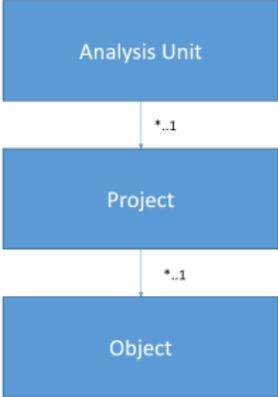
SQL Queries - CAST Knowledge Base - Queries on objects

- Identify and clean up all the ghost objects and ghost projects in your knowledge base

Purpose

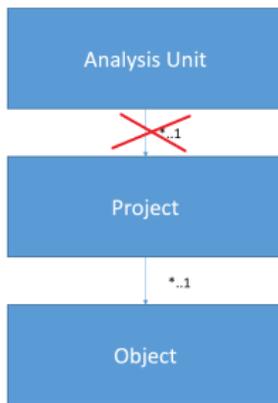
This page provide you the definition of ghost objects, how to identify them and how to clean them.

The following graph represent the simplified parenthood morphology of the objects in the knowledge base (Analysis Service database).On one hand each object in the knowledge base have one and only one project parent that have one and only one Analisis unit parent, in the other hand each analysis unit may have one or several Projects child, and each Project have one or several objects child.



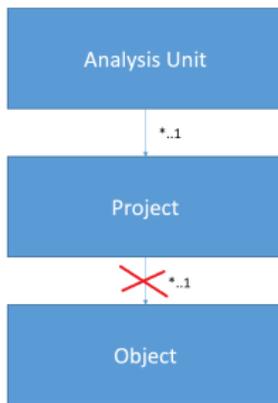
Fore some reason (As an example of root cause you can refer to [Urgent Notice - CAST AIP - Risk and impacts of synchronization when restoring only knowledge base or central schema instead of the entire triplet - 4th November 2016](#)), this parent to child relationship can be broken. We differentiate 2 different cases:

1. Broken links between analysis unit and project(s):



This act will result in Ghost project, therefore ghost objects, In order to identify and clean up the list of ghost projects and ghost objects, please refer to [Ghost Projects](#)

2. Broken links between project and object(s):



This act will result in ghost objects, In order to identify and clean up the list of ghost objects, please refer to [Ghost objects](#)

After cleaning up any ghost objects and projects, run a new analysis and snapshot to update all the information in the CAST databases.

Applicable in CAST Version

Release	Yes/No
8.3.x	✓
8.2.x	✓
8.1.x	✓
8.0.x	✓
7.3.x	✓

Applicable RDBMS

RDBMS	Yes/No
Oracle Server	✓
Microsoft SQL Server	?
CSS3	✓
CSS2	✓

Ghost Projects

Ghost Projects

The following query will work on CSS and oracle and when run on a knowledge base will list the set of ghost projects that are the result of broken links between analysis unit and project:

```
select p.IdPro,
       k.KeyNam,
       t.IdTyp,
       t.TypNam
from (select distinct op.IdPro
      from ObjPro op
      union
      select distinct a.IdPro
      from Acc a
     ) p
join Keys k
  on k.IdKey = p.IdPro
 and k.ObjTyp not in (306, 527)
join Typ t
  on t.IdTyp = k.ObjTyp
where p.IdPro not in (select distinct pd.IdPro
                     from AnaPro ap
                     join ProDep pd
                       on pd.IdProMain = ap.IdPro
                     join (select distinct op.IdPro
                           from ObjPro op
                           union
                           select distinct a.IdPro
                           from Acc a
                          ) p
                     on p.IdPro = pd.IdPro
                    );
```

As an example you can find:

Query result example

```
978145;"Sources_SHELL_13540";1000001;"universalProject"
```

In order to clean up the list of Ghost Projects, please execute the following query on you knowledge base. Note that this clean up is irreversible for that, we advice you to take a backup of your local (Analysis Service database), central (Dashboard Service database) and management base (Management Service database) even if the cleanup is done on only the knowledge base.

Query for CSS:

```
select PROJECT_DELETE(op.IdPro)
  from (select distinct op.IdPro
        from ObjPro op
        union
        select distinct a.IdPro
        from Acc a
        ) op
join Keys k
  on k.IdKey = op.IdPro
 and k.ObjTyp not in (306, 527)
where op.IdPro not in (select distinct pd.IdPro
                      from AnaPro ap
                      join ProDep pd
                        on pd.IdProMain = ap.IdPro
                      join (select distinct op.IdPro
                          from ObjPro op
                          union
                          select distinct a.IdPro
                          from Acc a
                          ) p
                      on p.IdPro = pd.IdPro
                      );
```

Query for Oracle - for each project_id identified in the query above run the following on the KB:

```

DECLARE
    Result INT;
BEGIN
    FOR d IN
        (SELECT p.IdPro
         FROM   (SELECT DISTINCT op.IdPro
                  FROM     ObjPro op

                 UNION

                 SELECT DISTINCT a.IdPro
                  FROM     Acc a
                 )
         P
         JOIN Keys k
         ON     k.IdKey = p.IdPro
         AND   k.ObjTyp NOT IN (306,
                               527)

         JOIN Typ t
         ON     t.IdTyp = k.ObjTyp
        WHERE  p.IdPro NOT IN

                (SELECT DISTINCT pd.IdPro
                 FROM     AnaPro ap
                 JOIN ProDep pd
                 ON       pd.IdProMain = ap.IdPro
                 JOIN

                        (SELECT DISTINCT op.IdPro
                         FROM     ObjPro op

                        UNION

                        SELECT DISTINCT a.IdPro
                         FROM     Acc a
                        )
                 P
                 ON       p.IdPro = pd.IdPro
                )
        )
    LOOP
        Result := PROJECT_DELETE(d.IdPro);
        COMMIT;
    END LOOP;
END;

```

Ghost objects

Ghost Objects

The following query run on the KB on Oracle or CSS will list the set of ghost objects that are the result of broken links between project and object:

```

select k.IdKey,
       k.KeyNam,
       t.IdTyp,
       t.TypNam
from Keys k
join Typ t
  on t.IdTyp = k.ObjTyp
join TypCat tc
  on tc.IdTyp = t.IdTyp
 and tc.IdCatParent = 2500
where k.ObjTyp not in (237, 355)
 and not exists (select 1
                 from ObjPro op
                 where op.IdObj = k.IdKey)
order by k.IdKey;

```

As an example you can find:

Query result example

```
437;"what_ordered.gif";274;"CAST_Web_File"
```

In order to clean up the list of Ghost objects, please execute the following query on you knowledge base. Note that this clean up is irreversible for that, we advice you to take a backup of your local, central and management base (even if the cleanup is done on only the knowledge base):

For CSS:

1. Create temporary table **WK_ObjToDelete**

```
create temporary table WK_ObjToDelete (IDOBJ INT NOT NULL);
```

2. Populate the temporary table with the ghost objects:

```

insert into WK_ObjToDelete
  (IDOBJ)
select k.IdKey
  from Keys k
 join Typ t
   on t.IdTyp = k.ObjTyp
 join TypCat tc
   on tc.IdTyp = t.IdTyp
  and tc.IdCatParent = 2500
where k.ObjTyp not in (237, 355)
 and not exists (select 1
                 from ObjPro op
                 where op.IdObj = k.IdKey);

```

3. Clean the set of ghost objects:

```
select INT_OBJECT_DEL();
```

4. Drop the temporary table

```
drop table WK_ObjToDelete;
```

For Oracle:

1. Create temporary table **WK_ObjToDelete** on the KB:

```
create global temporary table WK_ObjToDelete (IDOBJ INT NOT NULL) ON COMMIT PRESERVE ROWS;
```

2. Populate the temporary table with the ghost objects on the KB:

```
insert into WK_ObjToDelete
  (IDOBJ)
select k.IdKey
  from Keys k
  join Typ t
    on t.IdTyp = k.ObjTyp
  join TypCat tc
    on tc.IdTyp = t.IdTyp
   and tc.IdCatParent = 2500
where k.ObjTyp not in (237, 355)
   and not exists (select 1
                   from ObjPro op
                  where op.IdObj = k.IdKey);
commit;
```

3. Clean the set of ghost objects:

```
SET SERVEROUTPUT ON
EXEC DBMS_OUTPUT.PUT_LINE(INT_OBJECT_DEL());
```

4. Drop the temporary table

```
Truncate table WK_ObjToDelete;
drop table WK_ObjToDelete;
```

After cleaning up any ghost objects and projects, run a new analysis and snapshot to update all the information in the CAST databases.

Notes/comments

Impacts -

Data Functions and Transactions Functions will be reduced if the removed ghost object was part of this list

Related Pages