# KB Update SQL Tool - Adding a new object linked to a parent object that already exists using CI_OBJECTS and CI_PARENTS



When adding a new object to the Analysis schema you MUST also define a link with a parent object. If you do not do so, an error ("The parent of the object is missing") will be generated. See for more information on error handling.

## Based on object's ID

In this example, we are going to add a new object (a T-SQL View called "TEST") and link it as a child to the existing database "CASTPUBS" that is already synchronized with the Analysis schema. Remember that T-SQL objects are not automatically given OBJECT_GUIDs, but this method will allow you to create your own OBJECT_GUID for the new object and will automatically create the OBJECT_GUID for the existing object (where it does not exist).

The first thing to do is to check that no other objects in the Analysis schema are using what will be the new OBJECT_GUID for the new object (please see **KB Update SQL Tool - Creating OBJECT_GUIDs** for more information about creating OBJECT_GUIDs for objects that do not have them):

```
select count(1) Cnt
from CTV_GUID_OBJECTS
where OBJECT_GUID = 'SQL_VIEW.WESLEY.CASTPUBS..test.DATABASE.WESLEY.CASTPUBS'
```

The results return 0 for this OBJECT_GUID:

```
Cnt
[int]
----
0
```

The next step is to insert the data into the CAST entry tables that will create a new T-SQL object "TEST" and add a link to the existing parent database "CASTPUBS" when the tool is run:

```
insert into <KB_name>.dbo.CI_OBJECTS (OBJECT_GUID, OBJECT_TYPE, OBJECT_NAME, OBJECT_FULLNAME, ERROR_ID)
select 'SQL_VIEW.WESLEY.CASTPUBS..test.DATABASE.WESLEY.CASTPUBS', TYPE_NAME, 'TEST', 'WESLEY.CASTPUBS..TEST', 0
from <KB_name>.dbo.CTV_OBJECT_TYPES
where TYPE_DESCRIPTION = 'SQL View'
go
insert into <KB_name>.dbo.CI_PARENTS (OBJECT_GUID, PARENT_ID, ERROR_ID)
select 'SQL_VIEW.WESLEY.CASTPUBS..test.DATABASE.WESLEY.CASTPUBS', OBJECT_ID PARENT_ID, 0
from <KB_name>.dbo.CTV_GUID_OBJECTS
where OBJECT_NAME = 'CASTPUBS'
go
```

This is in effect two queries:

- The first creates the new object in the CI_OBJECTS table
- The second inserts the data in the CI_PARENTS table to create the link to the existing parent object. Please note the fact that this query fetches the parent object's OBJECT_ID and gives it the PARENT_ID alias (note that there is no comma between OBJECT_ID and PARENT_ID in the SELECT clause).

- The 0 parameter will enter 0 in the ERROR_ID column of the tables in question.
- Note that you need to specify the Analysis Service database and user as above "<KB_name>.dbo" otherwise the query will fail when the job is run.

Then:

- Complete the configuration of the job and run it.
- Make sure you then update the CAST System Views.

If you want to check that the object and link have been created successfully, you can use the following query in an SQL IDE against your Analysis Service (adapting it for your environment):

```
select OBJECT_ID, OBJECT_NAME, OBJECT_GUID
from CTV_GUID_OBJECTS
where OBJECT_NAME = 'TEST'
```

The result shows the OBJECT_GUID for the newly created object "TEST":

```
OBJECT_ID  OBJECT_NAME   OBJECT_GUID
[int]      [char]        [char]
-------------------------------------------------------------------------------
1843       TEST          SQL_VIEW.WESLEY.CASTPUBS..test.DATABASE.WESLEY.CASTPUBS
```

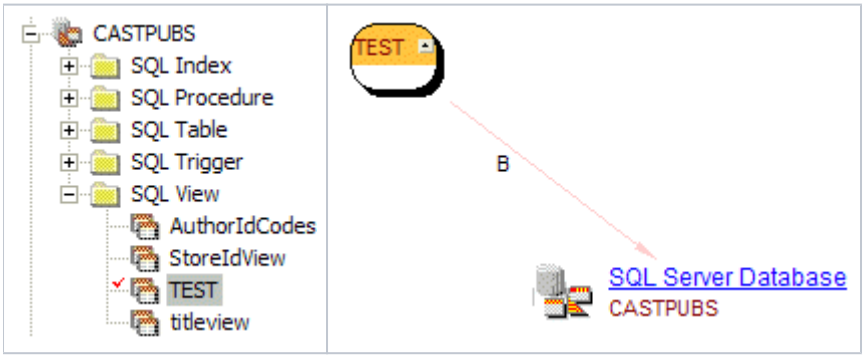
You can also check that the link to the parent object has also been created:

```
select OBJECT_GUID, PARENT_GUID
from CTV_GUID_PARENTS
where OBJECT_NAME = 'TEST'
```

The result shows the OBJECT_GUID and PARENT GUID for the newly created object "TEST" and the link:

```
OBJECT_GUID
[char]
SQL_VIEW.WESLEY.CASTPUBS..test.DATABASE.WESLEY.CASTPUBS
PARENT_GUID
[char]
DATABASE.WESLEY.CASTPUBS
```

Finally, you can check in CAST Enlighten - F5 to refresh the view - that everything is as it should be:




## Based on object's GUID

### Linked to a parent object that has an OBJECT_GUID

In this example, we are going to add a new object (a Function called "TEST ()" and link it as a child to the existing C++ object (a file called "EXAMPLE.C") in the Analysis schema. The first thing to do is to check that no other objects in the Analysis schema are using what will be the new OBJECT_GUID of this new object (please see chapter **KB Update SQL Tool - Creating OBJECT_GUIDs** for more information about creating OBJECT_GUIDs for objects that do not have them):

```
select count(1) Cnt
from CTV_GUID_OBJECTS
where OBJECT_GUID = 'C_Fct.TEST.C_Fi."D:\TESTAPPLICATIONS\SQL SERVER\DEMO_C\EXAMPLE..C"'
```

The result returns 0 for this OBJECT_GUID:

```
Cnt
[int]
----
0
```

The next step is to identify the OBJECT_GUID of the existing parent object "EXAMPLE.C":

```
select OBJECT_GUID
from CTV_GUID_OBJECTS
where OBJECT_NAME = 'EXAMPLE.C'
```

The result returns the following OBJECT_GUID for "EXAMPLE.C":

```
OBJECT_GUID
[char]
------------------------------------------------------
C_Fi."D:\TESTAPPLICATIONS\SQL SERVER\DEMO_C\EXAMPLE..C"
```

The next step is to insert the data into the CAST entry tables that will create a new object "TEST" and add a link to the existing parent object "EXAMPLE.C" when the tool is run:

```
insert into <KB_name>.dbo.CI_OBJECTS (OBJECT_GUID, OBJECT_TYPE, OBJECT_NAME, OBJECT_FULLNAME, ERROR_ID)
select 'C_Fct.TEST.C_Fi."D:\TESTAPPLICATIONS\SQL SERVER\DEMO_C\EXAMPLE..C"', TYPE_NAME, 'TEST', 'TEST', 0
from <KB_name>.dbo.CTV_OBJECT_TYPES
where TYPE_DESCRIPTION =  'C/C++ Function'
go
insert into <KB_name>.dbo.CI_PARENTS (OBJECT_GUID, PARENT_GUID, ERROR_ID)
values ('C_Fct.TEST.C_Fi."D:\TESTAPPLICATIONS\SQL SERVER\DEMO_C\EXAMPLE..C"', 'C_Fi."D:\TESTAPPLICATIONS\SQL
SERVER\DEMO_C\EXAMPLE..C"', 0)
go
```

This is in effect two queries:

- The first creates the new object in the CI_OBJECTS table
- The second inserts the data in the CI_PARENTS table to create the link to the existing parent object.

- The 0 parameter will enter 0 in the ERROR_ID column of the tables in question.
- Note that you need to specify the Analysis Service database and user as above "<KB_name>.dbo" otherwise the query will fail when the job is run.

Then:

- Complete the configuration of the job and run it.
- Make sure you then update the CAST System Views.

If you want to check that the object and link have been created successfully, you can use the following query in an SQL IDE against your Analysis Service (adapting it for your environment):

```
select OBJECT_ID, OBJECT_NAME, OBJECT_GUID
from CTV_GUID_OBJECTS
where OBJECT_NAME = 'TEST'
```

The result shows the OBJECT_GUID for the newly created object "TEST":

```
OBJECT_ID OBJECT_NAME OBJECT_GUID
[int]     [char]      [char]
-------------------------------------------------------------------------------------
5563      TEST         C_Fct.TEST.C_Fi."D:\TESTAPPLICATIONS\SQL SERVER\DEMO_C\EXAMPLE..C"
```

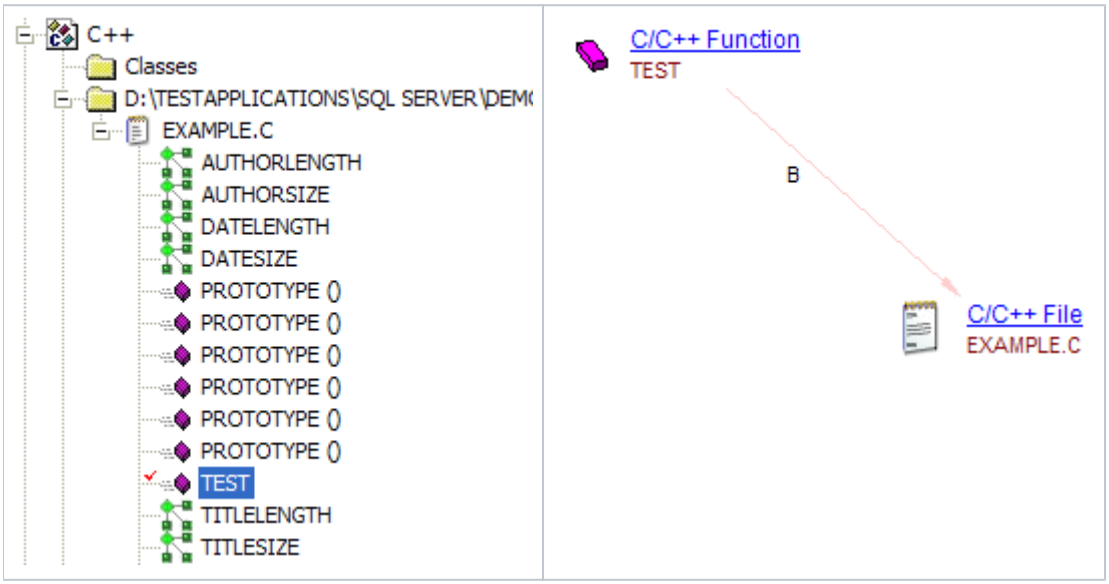
You can also check that the link to the parent object has also been created:

```
select OBJECT_GUID, PARENT_GUID
from CTV_GUID_PARENTS
where OBJECT_NAME = 'TEST'
```

The result shows the OBJECT_GUID and PARENT GUID for the newly created object "TEST" and the link:

```
OBJECT_GUID
[char]
C_Fct.TEST.C_Fi."D:\TESTAPPLICATIONS\SQL SERVER\DEMO_C\EXAMPLE..C"
PARENT_GUID
[char]
C_Fi."D:\TESTAPPLICATIONS\SQL SERVER\DEMO_C\EXAMPLE..C"
```

Finally, you can check in CAST Enlighten - F5 to refresh the view - that everything is as it should be:




## Linked to a parent object that has no OBJECT_GUID

> ⚠ Note that in AIP Core 8.3.45, the table **GUID_OBJECTS** can no longer be used . Attempting to use it will generate and **ERROR_ID = 5** on each returned row. If you have scripts using this table to generate custom OBJECT_GUIDs, for legacy technologies such as VisualBasic and PowerBuilder, you should update those scripts to use the OBJECT_ID (which is always available) instead of generating a custom OBJECT_GUID using this table. In this situation, the example below is obsolete and should not be used.

In this example, we are going to add a new T-SQL server object (a stored procedure called "TEST_PROC") to the Analysis schema. This will be added to the parent database "CASTPubs".

The first thing to do is to check that there are no other objects in the Analysis Service called "TEST_PROC". You can do so in CAST Enlighten, or you can use the following query in an SQL IDE against your Analysis Service (adapting it for your environment) to check that no other objects in the Analysis schema are using what will be the new OBJECT_GUID of this new object (please see **KB Update SQL Tool - Creating OBJECT_GUIDs** for more information about creating OBJECT_GUIDs for objects that do not have them):

```
select count(1) Cnt
from CTV_GUID_OBJECTS
where OBJECT_GUID  = 'CASTPubs.PROC.TEST_PROC'
```

The result returns nothing:

```
Cnt
[int]
----
0
```

The next step is to check what object is the parent of a stored procedure - in this case, we know it is the database "CASTPubs". You can check in CAST Enlighten.

Next you need to check whether the parent object already has a GUID:

```
select OBJECT_ID, OBJECT_NAME, OBJECT_GUID
from CTV_GUID_OBJECTS
where OBJECT_NAME  = 'CASTPubs'
```

The result shows us that it does not, so one will need to be created:

```
OBJECT_ID OBJECT_NAME OBJECT_GUID
[int]    [char]       [char]
4445     CASTPubs     NULL
```

The next step is to insert the data into the CAST entry tables that will create a new object "TEST_PROC", add a link to the existing parent object "CASTPubs" and create an OBJECT_GUID for "CASTPubs" when the tool is run:

```
insert into <KB_name>.dbo.GUID_OBJECTS (OBJECT_ID, OBJECT_GUID, ERROR_ID)
select OBJECT_ID, OBJECT_NAME, 0
from <KB_name>.dbo.CTV_GUID_OBJECTS
where OBJECT_NAME  = 'CASTPubs'
go
insert into <KB_name>.dbo.CI_OBJECTS (OBJECT_GUID, OBJECT_TYPE, OBJECT_NAME, OBJECT_FULLNAME, ERROR_ID)
select 'CASTPubs.PROC.TEST_PROC', TYPE_NAME, 'TEST_PROC','TEST_PROC', 0
from <KB_name>.dbo.CTV_OBJECT_TYPES
where TYPE_DESCRIPTION =  'SQL Procedure'
go
insert into <KB_name>.dbo.CI_PARENTS (OBJECT_GUID, PARENT_GUID, ERROR_ID)
values ('CASTPubs.PROC.TEST_PROC', 'CASTPubs',0)
go
```

This is in effect three queries:

- The first creates the OBJECT_GUID for the parent object "CASTPubs"
- The second creates the new object in the CI_OBJECTS table
- The second inserts the data in the CI_PARENTS table to create the link to the existing parent object "CASTPubs".

- The 0 parameter will enter 0 in the ERROR_ID column of the tables in question.
- Note that you need to specify the Analysis Service database and user as above "<KB_name>.dbo" otherwise the query will fail when the job is run.
- Please see **KB Update SQL Tool - Creating OBJECT_GUIDs** for more information about creating OBJECT_GUIDs for objects that do not have them.

Then:

- Complete the configuration of the job and run it.
- Make sure you then update the CAST System Views.

If you want to check that the object and link have been created successfully, you can use the following query in an SQL IDE against your Analysis Service (adapting it for your environment):

```
select OBJECT_ID, OBJECT_NAME, OBJECT_GUID
from CTV_GUID_OBJECTS
where OBJECT_NAME = 'TEST_PROC'
```

The result shows the OBJECT_GUID for the newly created object "TEST":

```
OBJECT_ID OBJECT_NAME OBJECT_GUID
[int]     [char]      [char]
-------------------------------------------------------------------------------
5566      TEST_PROC   CASTPubs.PROC.TEST_PROC
```

You can also check that the link to the parent object has also been created:

```
select OBJECT_GUID, PARENT_GUID
from CTV_GUID_PARENTS
where OBJECT_NAME = 'TEST_PROC'
```

The result shows the OBJECT_GUID and PARENT GUID for the newly created object "TEST" and the link:

```
OBJECT_GUID
[char]
CASTPubs.PROC.TEST_PROC
PARENT_GUID
[char]
CASTPubs
```

Finally, you can check in CAST Enlighten - F5 to refresh the view - that everything is as it should be: