

Problem

Can I pass around directly a Component Reference from one Component to another?

Solution

In short: NO!

There are cases where Component A needs to tell Component B about another Component C.

Component A has done a `getComponent()` on C and now it needs to tell B about C so that also B can use it.

At a first look it might seem that A can simply pass to B the plain CORBA reference to C, but in ACS this is not allowed

This is actually a strong violation of basic ACS principles.

One has to pass around the NAME (CURL) of the Component and the client has to do a `getComponent()` with that name.

The reason is that this is the only way the `Manager` has to keep track of who is using `Components`.

If you pass around directly the reference, the `Manager` cannot handle properly the reference counts and will possibly release the `Component` when there are still other clients.

The alternative would be that the application implement themselves reference handling, duplicating the job done by the `Manager`.

In some special cases, OFFSHOOT object can be used to pass around CORBA Objects (that are not components) whose lifecycle will be managed by the creator and not by the `Manager` (Architecture 3.4.3, 3.10.14, <http://www.eso.org/projects/alma/develop/acs/OtherDocs/ACSPapersAndSlides/ACS-Course/ACSCourse-OffshootClass.ppt>).

Instead of having IDL interfaces that takes a parameters CORBA references to components, you have simply to replace the reference with the name (CURL) and do a `getComponent` in the client.

Notice that this works perfectly also with dynamic components: once you have activated a dynamic component, you can pass its name around and just use `getComponent`. You do not need to use `getDynamicComponent` any more.

The component will then be released when all clients will be gone.

For more details, see the [ACS architecture, section 3.10.14](#)

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