

## **Composing Choreographies**

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We have a simple use case in which a Supplier choreography implements a purchasing protocol, but does not define what criteria determines whether an out of stock item should be ordered. The Customer choreography is composed with the Supplier choreography, to provide the logic to determine under what circumstances an out of stock item should be ordered, as opposed to cancelled.

In CDL one way of doing this is shown below in Example 1. This example demonstrates the data-centric approach to composing choreographies.

An alternative, though not fully fleshed out approach, would be to use an interaction-based approach in which behavioral compatibility is used in composing choreographies. This is shown in Example 2.

The key differences are the use of interaction and behavior which results, at least in the case, in a simpler approach to composition and insulates the designers of the individual choreographies from having to know any detail, other than behavior, of each others choreographies. We use the notion of an abstract choreography to describe the behavioral contract. This would not necessarily be a separate definition, although it could be viewed equivalent to an interface definition in relation to a 'class' that implements it.

It is worth pointing out that the former, data-centric approach, has no interaction for the customer choreography. Instead it uses intimate knowledge of the supplier choreography to set variables in keeping with a data centric approach.