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Java and SOAP By Robert Englander ISBN: 0-596-00175-4 Publisher: O'Reilly
Print Publication Date: 2002/05/01

Chapter 6. Custom Serialization

You may find that your web services and client applications work perfectly well using the set of data types supported by your SOAP implementation. After all, the technologies we're looking at provide a great deal of flexibility with their support for arrays and custom types. On the other hand, somewhere along the line you may need to serialize something that simply isn't possible using the techniques we've covered up to this point. Maybe you want to serialize the data for a Java class in a way that is more consistent with your existing applications, even if the encoding is not industry standard. Or maybe you want to add support for constructs that are described in the SOAP specification but are not supported in the available SOAP implementations.

The implementation of SOAP that you use may force you to write custom serializers for certain types of objects. For example, Apache provides the Bean serializer; it could provide other special case serializers, and it's not required to provide that one. So the conditions under which you need to supply a custom serializer are implementation dependent.

6.1. Custom Type Encoding

Let's start off by working with a custom data type that uses a nonstandard serialization. We'll develop this example using Apache SOAP. Imagine that we're developing a web service that acts as a pass-thru proxy to a proprietary stock market data feed. We want to send the data to the service already serialized in the form used by the feed. Yep, another contrived example! But by the time we finish it, I bet you'll have thought of a few uses for this technique. The service is designed to allow client applications to pass agreed-upon formats to the downstream data feed service without having to modify the web service itself. So the serialized data format is not known to the web service; it's understood only by the client application and the data feed. Figure 6-1 shows what this architecture might look like. Both of the client applications use the same service and invoke the same methods. However, they may or may not be using the same serialization format for the data to be sent to the data feed.

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Figure 6-1. A pass-thru service

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