

Web Services Performance

Agenda

- Areas where performance overhead occurs
- Web services performance tuning tips
- Fast Infoset

Areas of Performance Overhead

Performance Overhead

- Marshalling (serialization) and unmarshalling (unserialization)
 - > Java objects to XML and vice-versa
- XML encoding
 - > Compression, XML Infoset, Binary encoding will help
- XML parsing
 - > Skip validity check
- Business logic processing

Web Services Performance Tuning Tips

Remote Communication is Expensive

- Web services best practices are mainly the same as guidelines for developing other distributed systems
 - > Assume remote communication is expensive
 - > Do use coarse-grained RPC, that is, use Web services that "do a lot of work, and return a lot of information"
 - > Cache data on the client whenever possible to avoid requests to the server

Consider Overall System Performance

- Always take the overall system performance into account
 - > Don't optimize until you know where the bottlenecks are, i.e., don't assume that XML's "bloat" or HTTP's limitations are a problem until they are demonstrated in your application.

Use Asynchronous Comm. Model When Appropriate

- Asynchronous messaging can improve throughput, at the cost of latency
- When the transport may be slow and/or unreliable, or the processing is complex and/or long-running, consider an asynchronous messaging model

Fast Infoset

Questions?