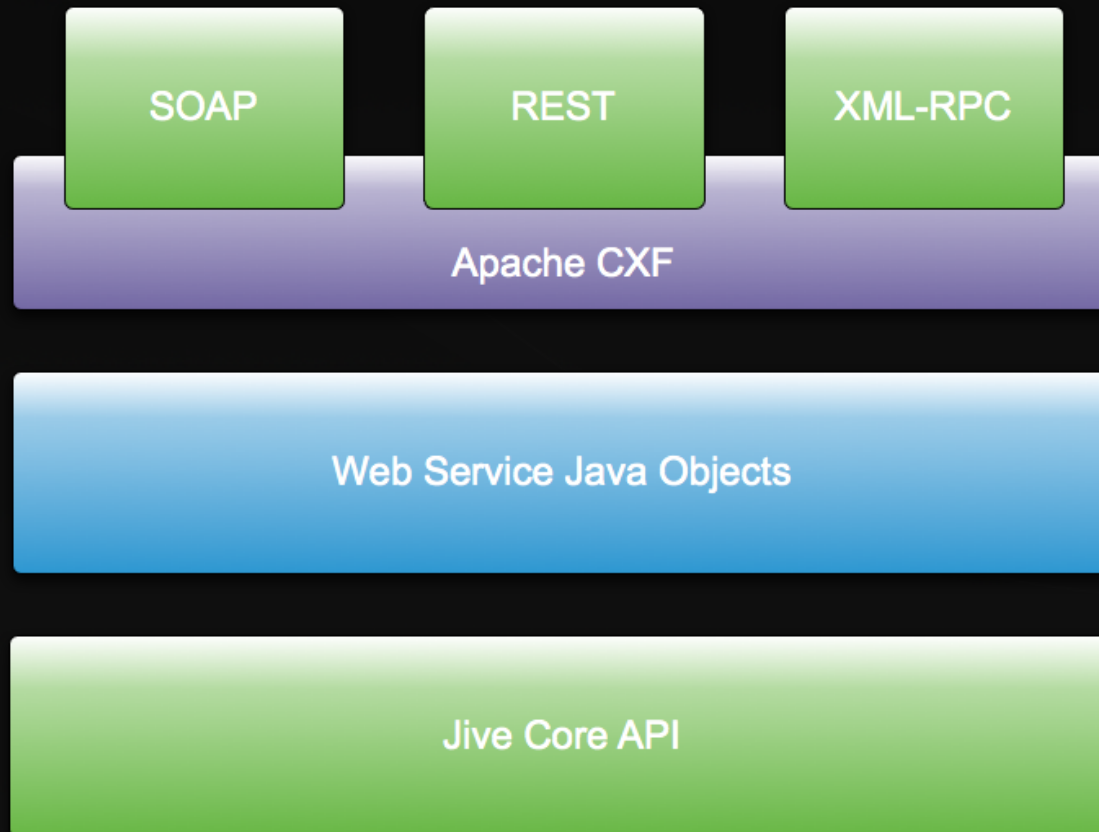


Web Services

Web Services in Clearspace

Architecture



Apache CXF

- High Performance
- Extensible
- Intuitive & Easy to Use
- Web Services Standards Support

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SOAP

Wrapped Document Literal

```
<types>
  <schema>
    <element name="myMethod"/>
      <complexType>
        <sequence>
          <element name="x" type="xsd:int"/>
        </sequence>
      </complexType>
    </element>
  </schema>
</types>
<message name="myMethodRequest">
  <part name="parameters" element="myMethod"/>
</message>
<message name="empty"/>

<portType name="PT">
  <operation name="myMethod">
    <input message="myMethodRequest"/>
    <output message="empty"/>
  </operation>
</portType>
```

SOAP

- Pros
 - Provides nice APIs for java and .net
 - “Industry Standard” many companies insist on it.
- Cons
 - Jive uses WS-Security for authentication. Some languages are yet to have support.
 - SOAP is complicated.

Authentication

```
<wsse:UsernameToken wsu:Id="Example-1">  
  <wsse:Username> ... </wsse:Username>  
  <wsse:Password Type="..."> ... </wsse:Password>  
  <wsse:Nonce EncodingType="..."> ... </wsse:Nonce>  
  <wsu:Created> ... </wsu:Created>  
</wsse:UsernameToken>
```

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REST

REST

- Pros
 - Very Simple Protocol
 - Can be easily supported on any platform
 - Does not require large libraries
- Cons
 - Have to deal with raw http requests
 - CXF is fairly limited on REST support (no views, http params supported) which can lead to confusing urls.
 - Not as easy to work with on java or .net

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XML-RPC

XML-RPC

- Pros
 - Simple protocol
 - Many platforms have support for it.
- Cons
 - Not as easy to work with on java or .net

Extending Web Services through Plugins

Links

- CXF - <http://incubator.apache.org/cxf/>
- WS-Security (Oasis) - <http://incubator.apache.org/cxf/>
- Apache WSS4j - <http://ws.apache.org/wss4j/>
- Apache xmlrpc - <http://ws.apache.org/xmlrpc/>