

# Port types

A port type is a named set of abstract operations and the abstract messages involved.

The port type name attribute provides a unique name among all port types defined in the enclosing WSDL document.

An operation is named via the name attribute.

WSDL has four transmission primitives that an endpoint can support:

- **One-way:** The endpoint receives a message.
- **Request-response:** The endpoint receives a message and sends a correlated message.
- **Solicit-response:** The endpoint sends a message and receives a correlated message.
- **Notification:** The endpoint sends a message.

WSDL refers to these primitives as operations. Although request/response or solicit/response can be modeled abstractly using two one-way messages, it is useful to model these as primitive operation types. See the example below for more information.



## Example:

Code:

```
<definitions name="StockQuote"
    targetNamespace="http://example.com/stockquote.wsdl"
    xmlns:tns="http://example.com/stockquote.wsdl"
    xmlns:xsd1="http://example.com/stockquote.xsd"
    xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/"
    xmlns="http://schemas.xmlsoap.org/wsdl/">

    <message name="SubscribeToQuotes">
        <part name="body" element="xsd1:SubscribeToQuotes"/>
        <part name="subscribeheader" element="xsd1:SubscriptionHeader"/>
    </message>

    <portType name="StockQuotePortType">
        <operation name="SubscribeToQuotes">
            <input message="tns:SubscribeToQuotes"/>
        </operation>
    </portType>

    <binding name="StockQuoteSoap" type="tns:StockQuotePortType">
        <soap:binding style="document" transport="http://example.com/smtp"/>
        <operation name="SubscribeToQuotes">
            <input message="tns:SubscribeToQuotes">
                <soap:body parts="body" use="literal"/>
                <soap:header message="tns:SubscribeToQuotes" part="subscribeheader" use="
literal"/>
            </input>
        </operation>
    </binding>

    <service name="StockQuoteService">
        <port name="StockQuotePort" binding="tns:StockQuoteSoap">
            <soap:address location="mailto:subscribe@example.com"/>
        </port>
    </service>

    <types>
        <schema targetNamespace="http://example.com/stockquote.xsd"
            xmlns="http://www.w3.org/2000/10/XMLSchema">
            <element name="SubscribeToQuotes">
                <complexType>
                    <all>
                        <element name="tickerSymbol" type="string"/>
                    </all>
                </complexType>
            </element>
            <element name="SubscriptionHeader" type="uriReference"/>
        </schema>
    </types>
</definitions>
```

Reversed UML model:

