

## Connectivity

# Concepts

## Rest service

The REST service editor is used for setting up request and response parts of a REST service. This can be used for calling external REST services or for setting up a [Web service](#).



## Soap service

The SOAP service editor is used for setting up an imported WSDL file.



## Domain schema

The Domain schema editor can be used to define the structure of REST requests and responses, or to add a mapping from your application domain.



## Schema set

The Schema set editor is used for viewing and setting up an imported XSD file.



## Web service

A web service is used to expose a model using REST or SOAP.



## Data mapping

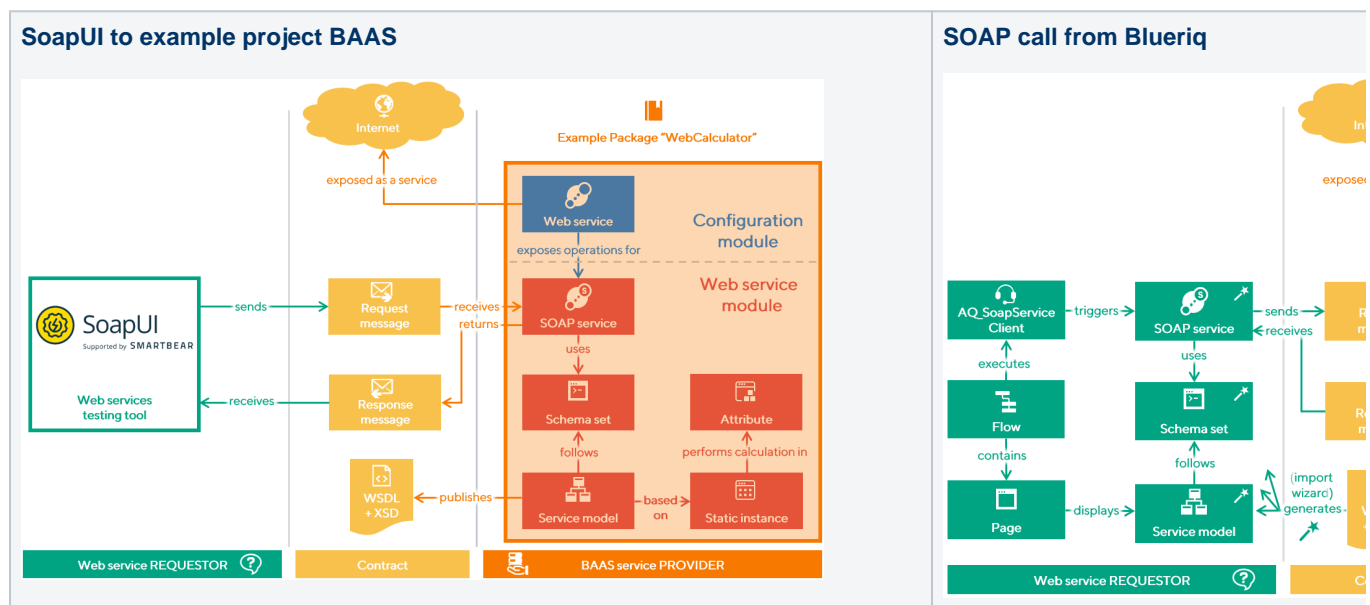
Data mappings are used to facilitate the exchange of data between modules with (potentially) differing domain models.

## Design guide

For the design guide on connectivity see [Web Services guide](#).

## Visuals

Here you will find the visuals regarding Web services. They provide insight in the Blueriq elements that are involved when calling a SOAP or a REST service, and when making a BAAS (Blueriq as a Service).



The diagram illustrates the flow of a REST call from a Business application to a Web service REQUESTOR. The process is as follows:

- Business application** (green box) triggers the **AQ\_RestService Client** (green box).
- The **AQ\_RestService Client** executes the **Flow** (green box).
- The **Flow** contains the **Page** (green box).
- The **Page** displays the **Business model** (green box).
- The **Business model** follows the **Domain schema** (green box).
- The **Domain schema** is based on the **REST service** (green box).
- The **REST service** uses the **Domain schema**.
- The **REST service** calls the URL of the **Web service REQUESTOR** (green box).
- The **Web service REQUESTOR** receives the call and returns the **Response message** (orange box).
- The **Response message** is then used to generate the **Document (free format)** (orange box).
- The **Document (free format)** is then used to generate the **Content** (orange box).

Additional context from the diagram:

- The **Web service REQUESTOR** is associated with a **Web service REQUESTOR** icon (a green box with a question mark).
- The **Response message** is associated with a **Response message** icon (an orange box with a question mark).
- The **Document (free format)** is associated with a **Document (free format)** icon (an orange box with a question mark).
- The **Content** is associated with a **Content** icon (an orange box with a question mark).

# REST call from Bluering to BAARS with

The diagram illustrates the REST call flow from Bluering to BAARS. It is divided into two main sections: 'Business application' and 'Web service REQUESTOR'.

**Business application:**

- Business model:** Contains a **Page**, which contains a **Flow**.
- Flow:** Executes the **AQ\_RestService Client**.
- AQ\_RestService Client:** Triggers the **REST service**.
- REST service:** Uses the **Domain schema** and calls the URL.
- Domain schema:** Based on the **Domain schema**, it follows the **Business model**.

**Web service REQUESTOR:**

- REST service:** Calls the URL and receives the **Response message**.
- Response message:** Contains the **Document (free form)**.

**Internet:** The **Response message** is exposed as a service to the **Internet**.

```
graph TD
    subgraph Business_application [Business application]
        BM[Business model] -- contains --> P[Page]
        P -- contains --> F[Flow]
        F -- executes --> ARSC[AQ_RestService Client]
        ARSC -- triggers --> RS[REST service]
        RS -- uses --> DS[Domain schema]
        DS -- follows --> BM
    end

    subgraph Web_service_REQUESTOR [Web service REQUESTOR]
        RS -- calls URL --> URL[URL]
        URL -- receives --> RM[Response message]
        RM -- contains --> DF[Document free form]
    end

    Internet((Internet)) -- exposed as a --> RM
```

The diagram illustrates the Call to BAAS architecture, showing the interaction between a Web service REQUESTOR and a BAAS service PROVIDER.

**Web service REQUESTOR (Left):**

- SoapUI:** A green box containing the SoapUI logo and the text "Supported by SMARTBEAR".
- Web services testing tool:** A green box below SoapUI.

**Contract (Middle):**

- Request message:** A yellow box with an envelope icon.
- Response message:** A yellow box with an envelope icon.
- WSDL + XSD:** A yellow box with a document icon and the text "(import wizard) generates".

**BAAS service PROVIDER (Right):**

- Web service module:** A red box containing:
  - SOAP service:** A red box with a gear icon.
  - Schema set:** A red box with a document icon.
  - Service model:** A red box with a document icon.
  - Attribute:** A red box with a document icon.
  - Static instance:** A red box with a document icon.
- Configuration module:** A blue box with a gear icon and the text "Web service".

**Interactions:**

- The **Internet** (cloud icon) is "exposed as a service" to the **Configuration module**.
- The **Configuration module** "exposes operations for" the **SOAP service**.
- The **SoapUI** "sends" a **Request message** to the **SOAP service**.
- The **SOAP service** "receives returns" a **Response message** to the **SoapUI**.
- The **SOAP service** "uses" a **Schema set**.
- The **Schema set** "follows" a **Service model**.
- The **Service model** is "based on" a **Static instance**.
- The **Static instance** "performs calculation in" an **Attribute**.
- The **WSDL + XSD** "(import wizard) generates" a **Service model**.

The diagram illustrates the interaction between a Web service REQUESTOR and a Web service PROVIDER, showing the flow of messages and the generation of WSDL + XSD.

**Web service REQUESTOR (Left):** A box containing the SoapUI logo and the text "Web services testing tool".

**Web service PROVIDER (Right):** A box containing the text "Contract".

**Internet (Top):** A cloud icon labeled "Internet".

**Message Flow:**

- The REQUESTOR **sends** a **Request message** to the PROVIDER.
- The PROVIDER **receives** the **Request message** and **sends** a **Response message** back to the REQUESTOR.

**WSDL + XSD Generation:**

- The PROVIDER **generates** **WSDL + XSD** (indicated by a red arrow pointing to a box labeled "WSDL + XSD").
- The generated **WSDL + XSD** is **imported** (indicated by a red arrow pointing to the REQUESTOR) and used to **generate** the **Request message** (indicated by a red arrow pointing to the REQUESTOR).

**Internet Interaction:**

- The PROVIDER is **exposed as a service** to the Internet (indicated by a blue arrow pointing from the PROVIDER to the Internet cloud).

## Supported connectivity methods

Below, a schematic outline is given of the default connectivity methods of Blueriq.

The green lines are the most common.

Transfer Protocol	Message Type	Message Structure
SOAP	XML	XSD
REST	XML	XSD
REST	XML	Domain Schema
REST	JSON	Domain Schema
REST	Single Value	n/a

You can find more information on what we support in our [web services datasheet](#).