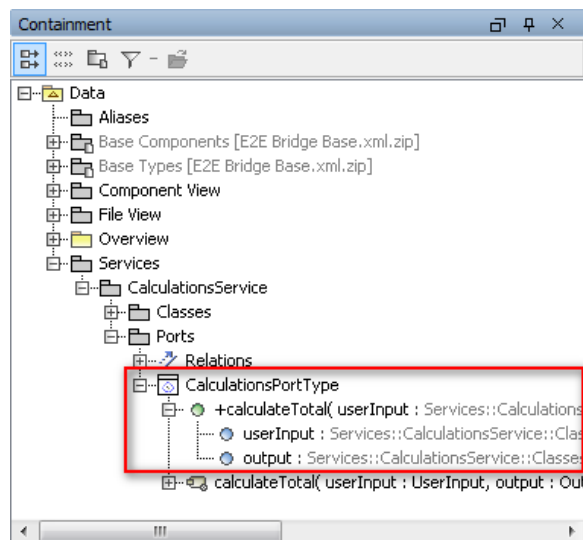


# Testing Services

## Testing of SOAP Services

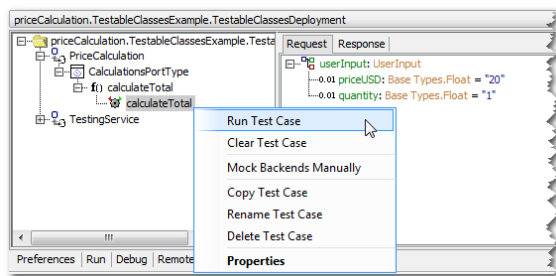
SOAP Services can easily be tested via their SOAP interfaces.

Figure: A SOAP Interface



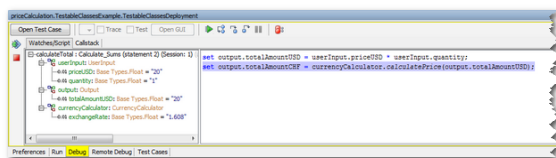
The **E2E SOAP Test Tool** as part of the **E2E Builder** allows testing of SOAP services running on the **E2 Embedded xUML Runtime** at development time.

Figure: E2E SOAP Test Tool



In combination with the **E2E Interactive Debugger** all activities and action scripts of the service can be stepped through watching the parameters and variables.

Figure E2E Interactive Debugger



Refer to the [Builder User's guide](#) for more information on the usage of the **E2E SOAP Test Tool** and the **The Interactive xUML Debugger**.

Services having been deployed to an **E2E Bridge** can be inspected with the **E2E Analyzer**. After importing the WSDL of the affected service, the deployed service can be tested similar to testing with the **SOAP Test Tool** of the **E2E Builder**.

Figure: E2E Analyzer

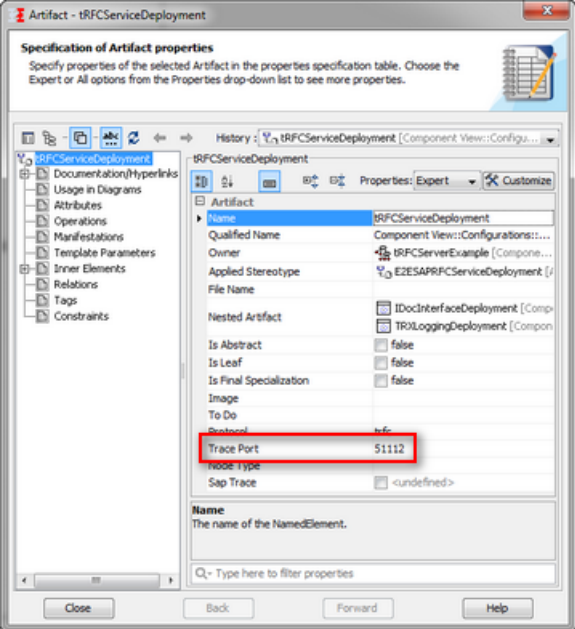
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### Related Pages:

- [E2E SOAP Test Tool](#)
- [The Interactive xUML Debugger](#)
- [Testable Classes](#)
- [Testing REST Services](#)

Non-SOAP services, such as timer services, schedulers, HTTP services and others are supplied by a SOAP interface for testing purposes. This **shadow** interface and the corresponding **shadow** service is generated automatically when compiling the service. That means, non-SOAP services can be tested the same way as described for SOAP services.



The generated shadow port will automatically get the same port number as the xUML service port but with a 5 as the first digit. Alternatively, to avoid port conflicts, the trace port can be set via the specification of the service deployment.

Find below a list of all **E2E Bridge** service types with their corresponding generated SOAP operations.

Service Type	Generated Operation
Timer	EXECUTE_TIMER_DIAGRAM
Scheduler	EXECUTE_SCHEDULER_DIAGRAM
Event Observer	<name of the Event Observer operation>, <event name>
HTTP	<name of the HTTP operation>
SAP RFC	<name of the SAP function>
Java	<name of the Java callback operation>
JMS Listener	<name of the JMS listener operation>
Startup / Shutdown	EXECUTE_STARTUP_ACTIVITY  EXECUTE_SHUTDOWN_ACTIVITY  The Startup/Shutdown service gets the name  StartupShutdownService4<name of the composite>

All classes can be made testable (see also [Testable Classes](#)) and subsequently be tested independently from the main service.