The SimplePing Example Model

Step by Step Guide

The following step-by-step guide describes how to build the provided 'SimplePing' example UML model from scratch using RSA.

Diagrams are included, but for still better visualization, open the example in RSA to have a look at the model element tree.

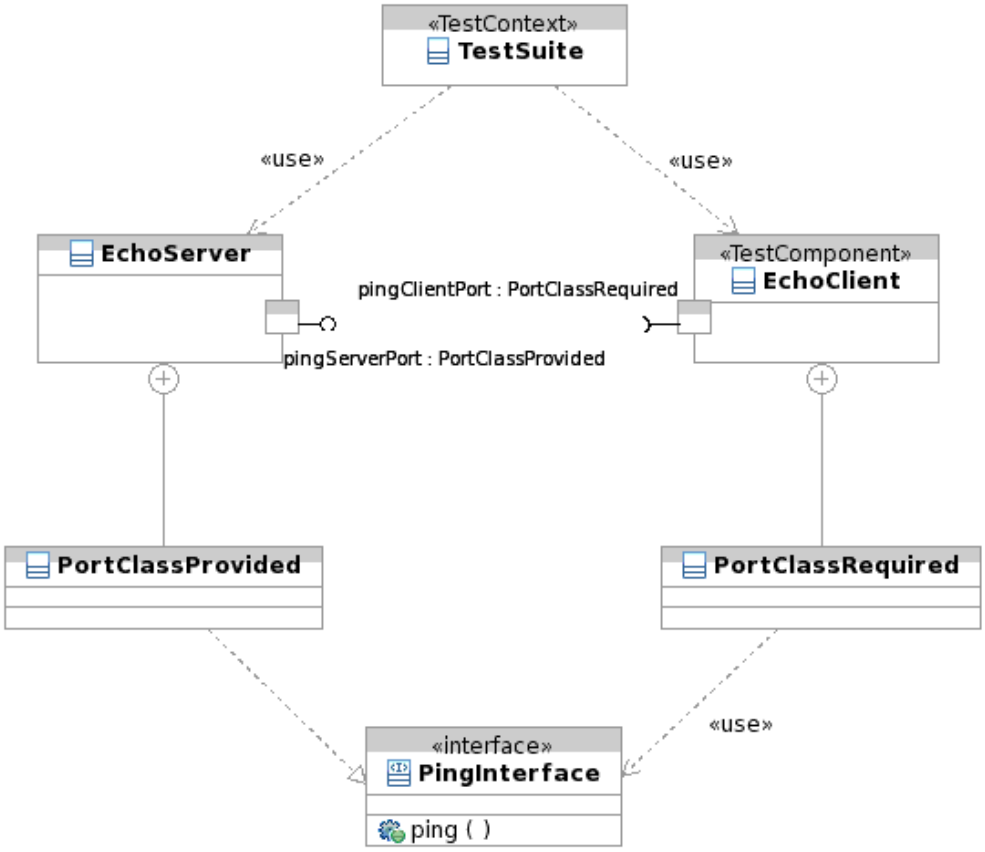
This guide is also organized as a tree, which means that each step is to be done inside its parent step model element.

Prerequisites

- Import the U2TProfile (File->Import->TTCN-3 Example Projects->U2TPProfile)

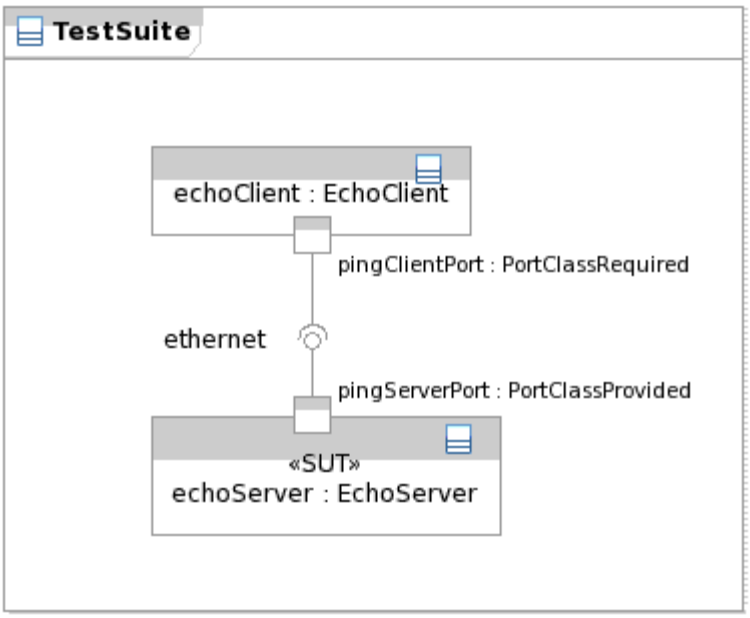
Test System Configuration

- Create a new project called 'SimplePing'
    - Create a model called 'SimplePing'.
        - Create a Package called 'root'.
        - Create an Interface called 'PingInterface'.
            - Create an Operation called 'ping' having an Integer in-parameter & Integer return value.
        - Create a Class called 'EchoServer'.
            - Create a nested class called 'PortClassProvided' which realizes the 'PingInterface'.
            - Add a port property called 'pingServerPort' of type 'PortclassProvided'.
        - Create a Class called 'EchoClient' and stereotype it as «TestComponent».
            - Create a nested class called 'PortClassRequired' which uses the 'PingInterface'.
            - Add a port property called 'pingClientPort' of type 'PortclassRequired'.
        - Create a Class called 'TestSuite' and stereotype it as «TestContext».



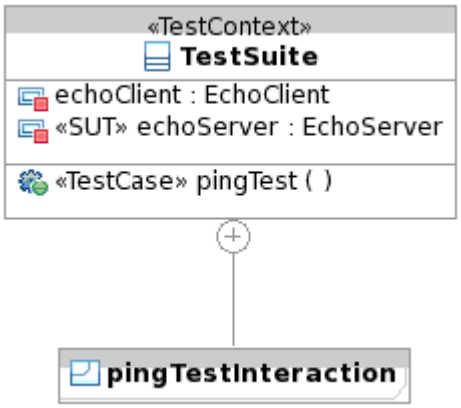
Test Communication Configuration

- In 'TestSuite', create a property called 'echoServer' of type 'EchoServer' and stereotype it as «SUT».
  Create a property called 'echoClient' of type 'EchoClient'.
- Right-click on 'TestSuite' and select 'Add Diagram' → 'Composite Structure Diagram' and name it 'CommunicationStructure_Diagram'.
  - Drag&Drop 'TestSuite' into the diagram.
  - Connect the two dangling port ends from 'pingClientPort' and 'pingServerPort' to form a new connector.
- Check the presence of this connector in the model tree, inside 'TestSuite', and name it 'ethernet'.



Test Suite Setup

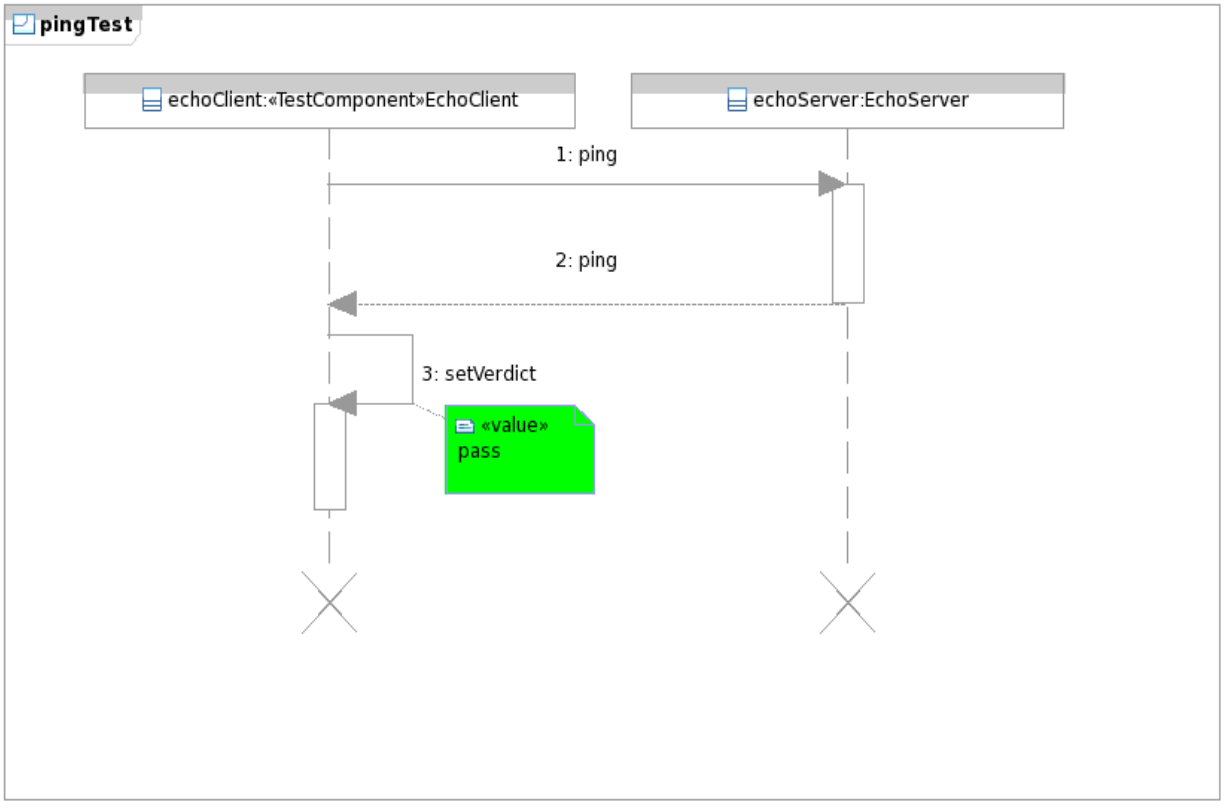
- In 'TestSuite', add an Operation element to 'TestSuite' called 'pingTest' and stereotype it as «TestCase».
- Create an Interaction called 'pingTest'.



- create two Lifelines representing 'echoClient' and 'echoServer'.
- create a message from the 'echoClient' Lifeline to the 'echoServer' Lifeline by clicking on the first and dragging to the second, choose 'Synchronous Call'

as type and select 'PingInterface::ping()' from the next menu.

- create a message solely on the 'echoClient' Lifeline (from the 'echoClient' Lifeline to the 'echoClient' Lifeline) of type 'Asynchronous Call' and name it 'setVerdict'.
    - Look up the SendOperationEvent in the 'General' tab of the Properties View of that message, and select it in the model tree.
        - As 'Operation' property choose 'setVerdict()' by selecting 'Browse', opening the 'U2TPPredefined' model and selecting 'Arbiter' → 'setVerdict()'.
- Add a comment to the 'setVerdict' message and sterotype it with the keyword «value».
    - As contents of the comment, type the word 'pass'.



Congratulations, you're done!