

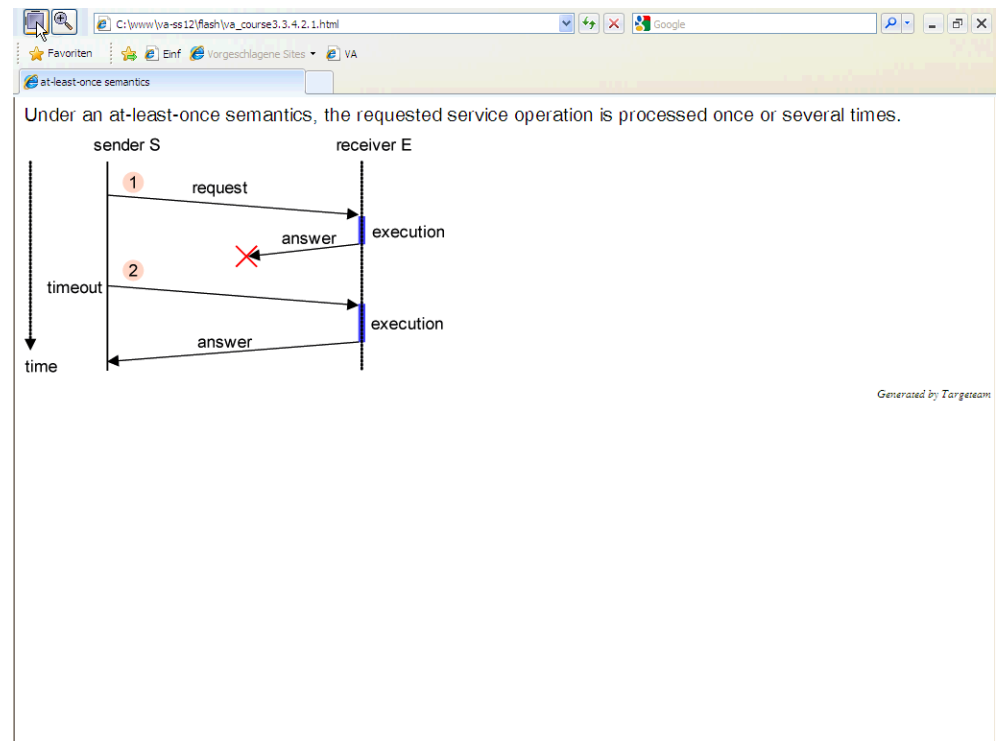
Script generated by TTT

Title: Distributed_Applications (30.04.2012)

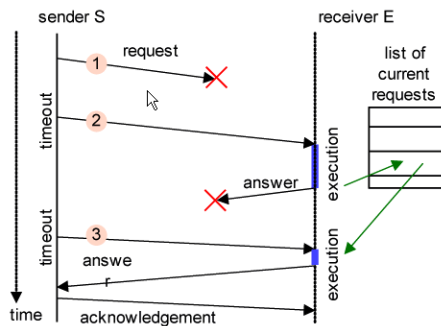
Date: Mon Apr 30 09:54:35 CEST 2012

Duration: 07:10 min

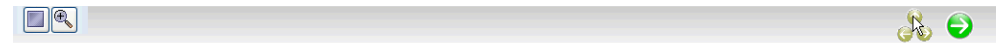
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requested service operation is processed exactly once: detection of repeatedly sent requests.



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Any communication between a sender and a receiver is subject to communication failures. Therefore, we distinguish between different call semantics.

at-least-once semantics

exactly-once semantics

last semantics

Under a last semantics, the requested service operation is processed once or several times, however, only the last processing produces a result and, potentially, some side-effects.

at-most-once semantics

Under an at-most-once semantics, the requested service operation is processed once or not at all.

Example for providing at-most-once semantics

After timeout at the sending site the request is not retransmitted.

The request is transmitted in the context of a transaction.

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Usage of the request-answer scheme for message exchange.

[Sockets](#)

Call semantics

Communication between sender and receiver is influenced by the following situations

loss of request messages.

loss of answer messages.

sender crashes and is restarted.

receiver crashes and is restarted.

[Different types of call semantics](#)