

Exercise Session 1

Reliable Broadcast

October 4, 2010

Exercise 1

What happens in the reliable broadcast and uniform reliable broadcast algorithms if the: (a) accuracy, (b) completeness property of the failure detector is violated?

Exercise 2

Implement a reliable broadcast algorithm without using any failure detector (i.e., using only *BestEffort-Broadcast* (beb)).

Exercise 3

Assume a majority of processes is correct. Modify the uniform reliable broadcast algorithm presented in the class, such that it *does not* use any failure detector.

Exercise 4

The reliable broadcast algorithm presented in the class has the processes continuously fill their different buffers without emptying them. Modify it to remove unnecessary messages from the buffers: (a) *from* $[p_i]$, and (b) *delivered*.