## Attributes

```
xbe name=lag_2 integrate=yes
# This is used to create a "lag".
# d_dt(y)=(1.0/tr)*(-y+x)
# tr is computed s.t., at t=t_delay, y=v_high/2 (assuming
# a step from 0 to v_high is applied)
#
Jacobian: constant
input_vars: x
output_vars: y
aux_vars:
iparms:
sparms:
rparms:
+ t_delay=1
+ k=1
stparms: y_st=0
igparms: y_ig=0
outparms: x y
```

## Description

lag\_2.xbe is used to get an output y which is a delayed form of x. The real parameter t\_delay specifies the amount of delay. If the input is a square wave from 0 to  $V_0$ , then the output waveform resembles an *RC* circuit response and goes through  $V_0/2$  at a time t\_delay after the clock edge. This is illustrated in Fig. 1.

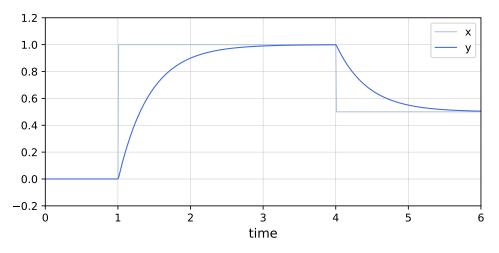


Figure 1: Waveforms obtained with  $lag_2$ .xbe, with  $t_delay = 0.3$ .