We solve this first order lin DE in Y.

An integrating factor is $\mu(s) = e^{\int 2/s\, ds} = e^{2\ln s} = s^2$.

$$\frac{d}{ds}(s^2 Y) = 2sY + s^2 Y'$$
$$= s^2\left(Y' + \frac{2}{s}Y\right)$$
$$= s^2\left(\frac{2}{s^2}\right) = 2.$$

So

$$\frac{d}{ds}(s^2 Y) = 2$$

$$s^2 Y = 2s + C$$

$$Y = \frac{2}{s} + \frac{C}{s^2}$$

$$y = \mathcal{L}^{-1}\{Y\} = 2 + Ct$$

$y(0) = 2$.

$y'(t) = C$, $y'(0) = -1$ so $C = -1$ &

$$\boxed{y = 2 - t}.$$