$$\delta = \int_0^t \frac{n\_accesses}{size\_GB * n\_replicas} \, \mathrm{d}t \tag{1}$$

$$\sigma = \sqrt{\frac{\sum\limits_{d \in \mathcal{D}} (\delta_d - \overline{\delta})^2}{|\mathcal{D}| - 1}} \tag{2}$$