

$$x_{t+1} = \frac{1}{W} \sum_{w=1}^W x_{t+1}^{(w)}$$

server

$$x_{t+1}^{(1)} - x_t$$

$$x_t$$

$$x_{t+1}^{(W)} - x_t$$

$$x_t$$

worker 1

... ..

worker W

$$x_{t+1}^{(w)} = \arg \min_{y \in \mathbb{R}^d} \left\langle g_t^{(w)}, y - x_t \right\rangle + \frac{1}{2\eta_t} \|y - x_t\|_2^2$$