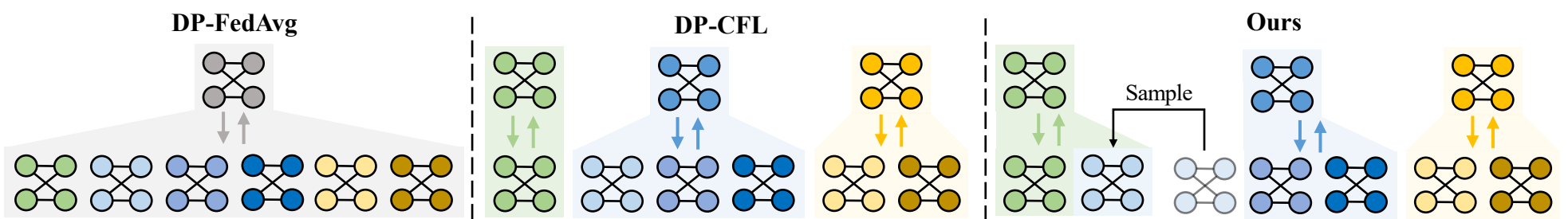
DP-FedAvg
DP-CFL
Ours
Sample
$w = \frac{1}{m} \sum_{i \in [m]} (w_i + \mathcal{N}(0, \sigma^2/m))$
$w = \frac{1}{|S_j|} \sum_{i \in [|S_j|]} (w_i + \mathcal{N}(\mathbf{0}, \boldsymbol{\sigma^2/1}))$
More Noise for worst case $|S_j| = 1$
$w = \frac{1}{|S_j|} \sum_{i \in [|S_j|]} (w_i + \mathcal{N}(\mathbf{0}, \boldsymbol{\sigma^2/B}))$
Keep $|S_j| \geq B$ to Reduce Noise