Legend:
- HN-PFL $\tau_s^L = 1$ $\tau_s^G = 1$
- HN-PFL $\tau_s^L = 2$ $\tau_s^G = 1$
- HN-PFL $\tau_s^L = 4$ $\tau_s^G = 1$
- HN-PFL $\tau_s^L = 8$ $\tau_s^G = 1$
- H-FL $\tau_s^L = 1$ $\tau_s^G = 1$
- H-FL $\tau_s^L = 2$ $\tau_s^G = 1$
- H-FL $\tau_s^L = 4$ $\tau_s^G = 1$
- H-FL $\tau_s^L = 8$ $\tau_s^G = 1$

FMNIST loss global

FMNIST Performance Accuracy Global