**Server Eslapsed Time** h-time-WholeTree Proof-as-Element 5 Layer-based PBC-SealPIR Coloring-based 4 **Server Eslapsed Time** seconds seconds 0.2 0.4 0.6 8.0 1.0 1e6 1 0 1.2 0.0 0.2 0.4 8.0 0.6 1.0 1e6 n