

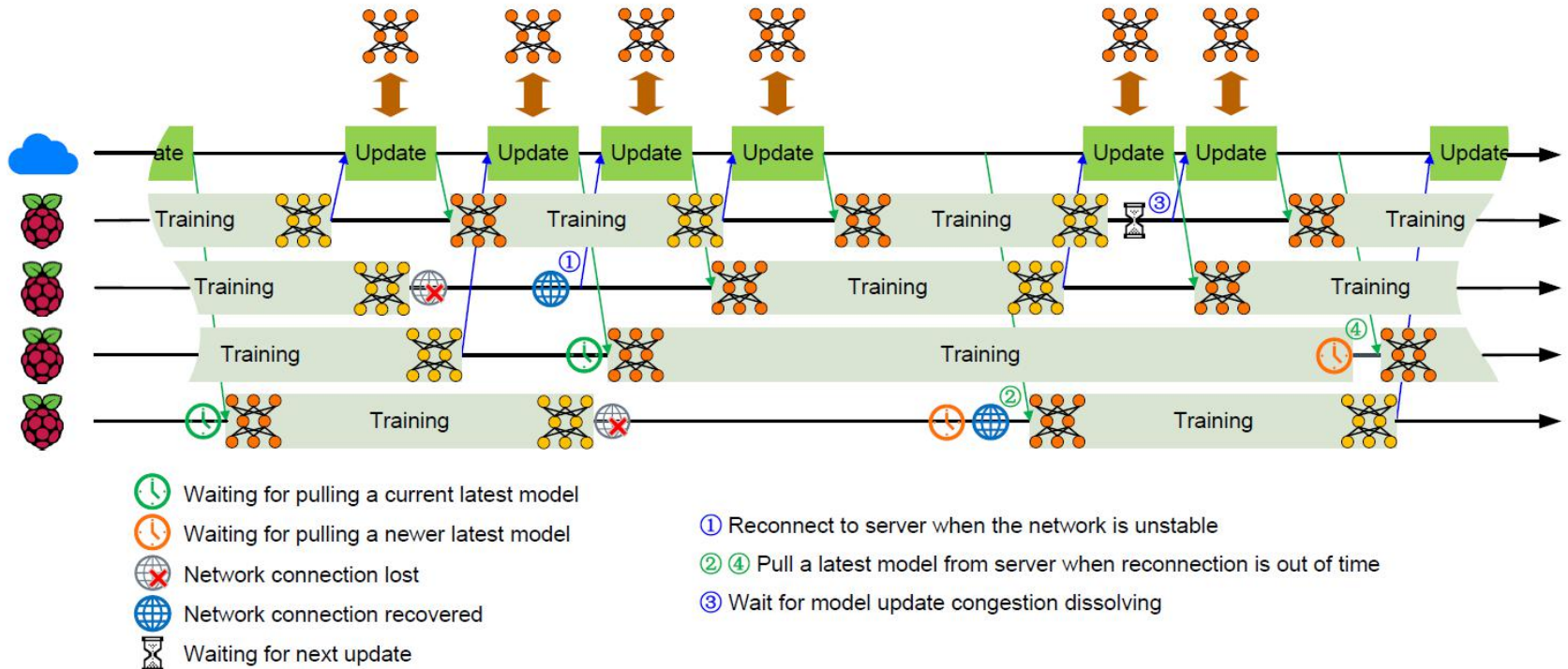
# Prototyping federated learning on edge computing systems

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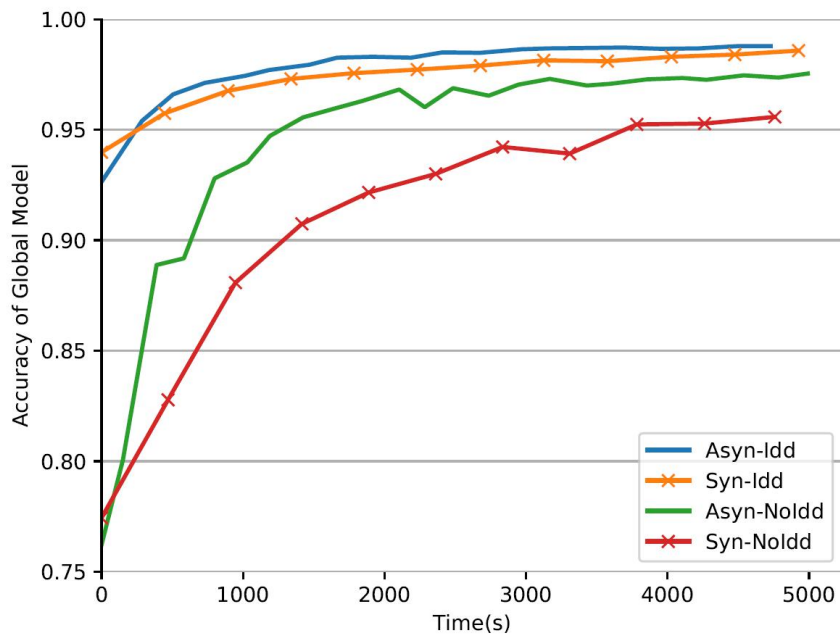
# Problems & Ideas

- **Federated Learning for Users' Privacy Protection**
  - Computation and communication cost
  - Convergence rate of distributed training
- **Ideas: Asynchronous Federated Learning**
  - Only sends the latest model to the request device and then performs bounce-update for each training round

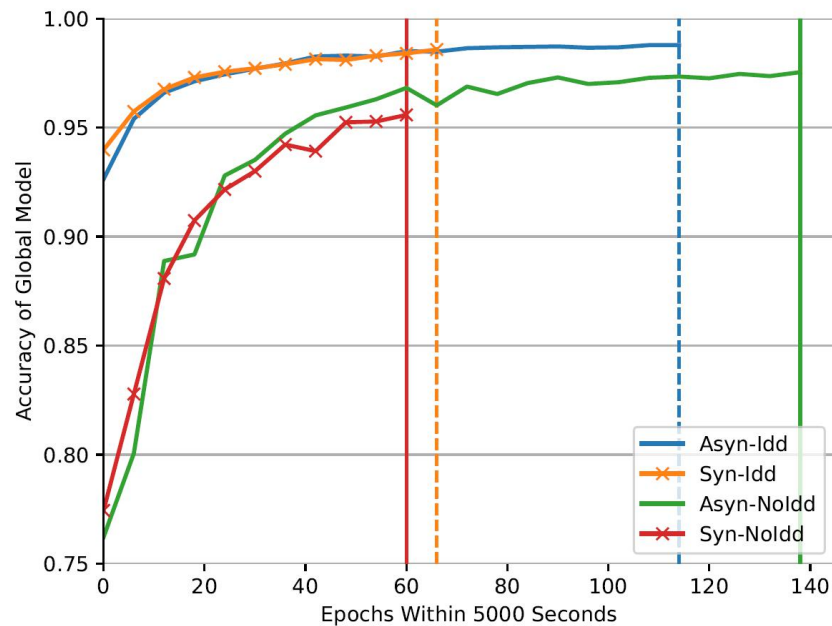


# Main Contributions

- **Model training convergence rate of Sync-FL and Async-FL with identically or non-identically input data distribution.**
  - Prototyped on a group of Raspberry Pi 3B+ devices
  - Deploying LeNet on MNIST dataset



Accuracy to training time



Accuracy to total epochs