


UCX

The Thing Behind MPI - UCX

- Open MPI (and other HPC libraries) utilizes UCX to significantly accelerate transport mechanisms.
- However, it is not always clear how UCX selects the optimal communication protocol for a given system or how it manages different frameworks.
- Therefore, in this assignment, we aim to provide an **overview of the UCX architecture** and become **familiar with its code flow and tracing process** in the context of a **large-scale project**.

HW5 - UCX

- Spec
- Report template
- **Deadline: 12/21 23:59**

Tips for Getting Started with the Assignment Report

- We recommend starting with a simple Hello World example to become familiar with the UCX workflow before writing the report.
- [Unified Communication X for Performance Portable Network Acceleration](#)
 - [1:05:30 ~ 1:21:10]
- [ucp_hello_world.c](#)
- [OpenUCX API Document](#)

Useful Tool

- MVAPICH :: Benchmarks
 - osu_latency - Latency Test
 - osu_bw - Bandwidth Test

Lab7

- In this lab, try modifying the [UCX-Lsalab](#) repo to print out which transport protocol UCX selects. (Just the Line2 of the output requirement in the homework spec)
- Hint.
 - Try running a standard `mpirun` with `-x UCX_LOG_LEVEL=info` to obtain debug information during UCX runtime, which is useful.



END