

Joint Development Foundation Projects, LLC

Background

The Joint Development Foundation and its subsidiaries are dedicated to helping standards, specification, source code, and related projects start quickly and operate efficiently. Joint Development Foundation Projects are ideal for long term standards, specification source code projects, data projects, or as a place to do incubation projects before taking those projects to larger organizations.

By using established Joint Development Foundation legal agreements, groups can establish projects quickly and with minimal legal expense. By operating under the Joint Development Foundation's legal umbrella, Projects can enjoy the benefits of Joint Development Foundation's existing legal agreements, choice of intellectual property policies, non-profit status, and corporate structure. This enables Projects to more easily establish themselves, collect funds, issue press releases in the Project's name, develop liaison relationships, and hold copyrights, all without negotiating custom agreements and new corporate organizations.

The Joint Development Foundation operates under a freemium-type model, where projects can be established and operated without paying anything. Projects can provide their own infrastructure (websites, email reflectors, conference organization, etc.), or can work with Joint Development Foundation approved vendors to provide these types of services if they wish.

Getting Started

1. Contact Us. Contact Joint Development Foundation Projects, LLC at admin@JDFProjects.org to discuss your Project.
2. Create the Project. If it's a good fit, Joint Development Foundation Projects, LLC will create the legal entity for your Project. Technically, it will be series under Joint Development Foundation Projects, LLC. Your Project will have its own independent governance, identity, membership, and scope of work.
3. Sign the Membership Agreement. Joint Development Foundation Projects, LLC will then provide you with a Membership Agreement, Project Charter and Working Group Charter(s) for your Project to complete.
 - Membership Agreement. The Membership Agreement establishes the options selected by the Project, and is the document that is executed to join that Project.
 - Project Charter. The Project Charter establishes the Project and includes the governance and legal terms for the Project and its Steering Committee.
 - Working Group Charters. Each Project may then complete one or more Working Group Charters, which establishes the governance, scope and intellectual property terms for each Working Group under the Project.
4. Get to Work. Once those documents are established, your Project is up and running.

Joint Development Foundation Projects, LLC

Membership Agreement

This “Membership Agreement” establishes your membership with the Project identified below. This Project operates as a subsidiary/series of Joint Development Foundation Projects, LLC.

1. Project Name.

- Project Name. **Consortium for HPC/AI/ML Ethernet**
- Formal Name. Joint Development Foundation Projects, LLC, **Consortium for HPC/AI/ML Ethernet Series.**

2. Project Description.

Develop HPC/AI/ML Ethernet specifications or source code to define: (i) the protocols, electrical and optical signaling characteristics, application program interfaces, and/or data structures for Ethernet communications at Interface Boundaries, (ii) link level and end-to-end network transport protocols to extend or replace existing link and transport protocols, and/or (iii) link level and end-to-end congestion telemetry and signaling mechanisms; each of the foregoing suitable for artificial intelligence, machine learning, and high performance computing environments, and solely to enable products to interoperate.

“Interface Boundaries” means any interface between devices and/or end-points requiring interoperability for compliance with the specifications.

Each Working Group Scope must be consistent with, and not outside the scope of, this Project Description.

3. Steering Committee Composition. **[Check one box].**

- Designated by Steering Member. Each Steering Member will designate a Steering Committee participant.
- Designated by Steering Committee Consensus. The Steering Committee will nominate, accept, and remove Steering Committee participants from the following membership classes □ **Steering Member**, □ **General Member**, □ **Contributor** subject to that participant’s agreement to serve on the Steering Committee. Steering Members waive their option to designate a Steering Committee participant.

4. Initial Project Leadership.

- Initial Chairperson. **Brad Booth, Meta**
- Initial Steering Committee members.
 1. Moray McLaren, Microsoft
 2. Uri Elzur, Intel
 3. Terry Morris, HPE
 4. J Metz, AMD
 5. Mohan Kalkunte, Broadcom
 6. Rob Stone, Meta
 7. Anshul Sadana, Arista
 8. Eric Eppe, Atos
 9. Mark Nowell, Cisco

5. Project Sponsorship.

- No Sponsorship Fees. There are no sponsorship fees associated with the Project, subject to change during subsequent terms upon at least 90 days’ notice prior to expiration of the then current term.
- Financial Support of the Project. **Project sponsorship at the Steering Member and General Member levels requires 1) a separate Linux Foundation membership, and 2) execution and compliance with the Project Sponsorship Agreement**

between the Member and the Linux Foundation attached hereto. Sponsorship fees are subject to change during subsequent terms upon at least 90 days' notice prior to expiration of the then current term.

- Alternative or Additional Funding. **[Insert alternative or additional funding method].**

By executing this Membership Agreement, the undersigned parties agrees to be bound by this Membership Agreement, the Project Charter and the terms of the Working Group Charter(s) it has joined.

Membership Level:

[Steering Member, General Member, Contributor]

By the Project

<i>Signature:</i>	
<i>Print Name:</i>	J Metz
<i>Title:</i>	Chairperson
<i>Company Name:</i>	Consortium for HPC/AI/ML Ethernet
<i>Email:</i>	j.metz@amd.com
<i>Address:</i>	3500 South Dupont Highway Suite AA101, Dover, DE 19901
<i>Date:</i>	

By the Member

<i>Signature</i>	
<i>Print Name:</i>	
<i>Title:</i>	
<i>Company Name:</i>	
<i>Email:</i>	
<i>Address:</i>	
<i>Date:</i>	

Joint Development Foundation Projects, LLC

Project Charter

This “Project Charter” establishes the terms under which this Project will operate as a subsidiary/series of Joint Development Foundation Projects, LLC. The Joint Development Foundation’s role in the Project is, unless otherwise requested by the Project, limited to confirming that Projects conduct their activities in accordance with the Joint Development Foundation’s corporate purpose and policies, such as its non-profit status and regulatory guidelines. Projects are otherwise independent. The Joint Development Foundation may help provide the Project with value-added and fee-based services at the election of the Project.

1. Project Initiation. The Project will become effective upon execution of a Membership Agreement for this Project by 2 Steering Committee members. New parties may join the Project upon Approval of the Steering Committee.
2. Membership Levels.
 - 2.1. Steering Member. Steering Members may participate in each Working Group and, unless waived per the Membership Agreement, the Steering Committee.
 - 2.2. General. General Members may participate in each Working Group, but do not participate on the Steering Committee.
 - 2.3. Contributor. Contributors may participate in Working Group(s) designated by the Steering Committee, but do not participate on the Steering Committee and are not eligible to participate in decisions that require a Supermajority Vote.
3. Organization.
 - 3.1. Steering Committee. The Steering Committee is the body that is responsible for governing the Project, coordinating Working Groups, and managing assets.
 - 3.2. Chairperson. The Project will have a Chairperson whose responsibilities are set forth in the Series Agreement and will include leading the Steering Committee, organizing meetings, organizing voting, identifying new Working Groups, managing finance, tracking Working Group progress, ensuring Working Group meet their goals, and any other activities Approved by the Steering Committee. The Chairperson may delegate responsibilities to another party. The Steering Committee may Approve a new Chairperson.
4. Decision Making.
 - 4.1. Consensus/Voting/Approval. The Steering Committee will endeavor to make all decisions by consensus. Where the Steering Committee cannot reach consensus with respect to a particular decision, the Steering Committee will make that decision by a Supermajority Vote.
 - 4.2. Appeals. Steering Committee decisions may be appealed by issuing a written appeal to the Chairperson, and that appeal will be considered by the Chairperson and the Steering Committee in good faith. The Chairperson will respond in writing within a reasonable time.
 - 4.3. Notifications and Electronic Voting. The Chairperson is responsible for issuing all notifications of meetings and votes of the Steering Committee subject to the following minimum criteria: (i) in-person meetings require at least 30 days prior written notice, (ii) teleconference meetings require at least 7 days prior written notice (this requirement only applies to the notification of the first meeting of automatically recurring teleconference meetings), (iii) electronic votes require no advance notice but must be made pursuant to a clear and unambiguous ballot with only “yes” and “no” options, and the voting must remain open for no less than 7 days. These notification requirements with respect to the Steering Committee may be overridden upon unanimous consent of the Steering Committee members that have attended and participated in at least 50% of the last 4 meetings of the Steering Committee.
5. Due Process. The Project adheres to consensus-based due process, including openness, balance, adequate notice and review periods, and fair and impartial consideration of views and objections.
6. Working Groups. The Project may have multiple Working Groups, and each Working Group will operate as set forth in its Working Group Charter.
7. Conditions for Contributions. A Steering Member, General Member, or Contributor may not make any Contribution unless that Steering Member, General Member or Contributor is the exclusive copyright owner of the Contribution or has sufficient copyright rights from the copyright owners to make the Contribution under the terms of this Project Charter and applicable

Working Group Charter. The Steering Member, General Member, or Contributor must disclose the identities of all known copyright owners in the Contribution.

8. Withdrawal and Termination.

- 8.1. Term. The term of this agreement is 1 year from the date this agreement is countersigned by the Project. Upon the expiration of any term, this Project Charter will automatically renew for successive 1 year periods unless a party provides the other party with notice of its intent not to renew this Project Charter at least 30 days prior to the expiration of the then current term.
- 8.2. Change in Membership Level. Upon a Supermajority Vote of the Steering Committee (calculated without the vote of the party in question), a party's Steering Member membership may be changed to a General Member effective upon the expiration of that party's then current term.
- 8.3. Withdrawal or Termination. A Steering Member, General Member, or Contributor may withdraw from a Working Group or the Project at any time by notifying the Chairperson in writing, and that withdrawal is effective upon receipt of the notice. Upon a Supermajority Vote of the Steering Committee (calculated without the vote of the party in question), a Steering Member, General Member, or Contributor may be terminated from the Project or withdrawn from a Working Group.
- 8.4. Project Termination. Upon a Supermajority Vote of the Steering Committee, the Project will cease and terminate as of the effective date designated in that vote. The Chairperson will coordinate with Joint Development Foundation Projects, LLC to facilitate that termination.
- 8.5. Effect of Withdrawal or Termination. Upon a Steering Member's, General Member's, or Contributor's written withdrawal from a Working Group or upon the termination of its Project membership, all existing commitments and obligations with respect to the Project or Working Group, as the case may be, up to the effective date of withdrawal or termination will remain in effect, but no new obligations will be incurred. Notwithstanding the foregoing, the patent licensing commitments shall continue to apply to any patent claims that would be subject to a patent licensing commitment for a Final Specification that are included in a Draft Deliverable 45 days prior to the effective date of withdrawal or termination, unless otherwise excluded in accordance with the Working Group intellectual property licensing mode.
- 8.6. Good Standing Requirement. Steering Members, General Members, and Contributors that have separately agreed to support the Project through execution of a Project Sponsorship Agreement with the Linux Foundation agree that they will remain current in payment of amounts owed under such participation agreement and that the Steering Committee may suspend any party that is not current in payments owed under such a Project Sponsorship Agreement.

9. Representations, Warranties and Disclaimers. Steering Members, General Members, and Contributors represent and warrant that they are legally entitled to grant the rights and promises set forth in this agreement. IN ALL OTHER RESPECTS THE CONTRIBUTIONS ARE PROVIDED "AS IS." The entire risk as to implementing or otherwise using a Draft Deliverable or Approved Deliverable is assumed by the implementer and user. Except as stated herein, Steering Members, General Members, and Contributors expressly disclaims any warranties (express, implied, or otherwise), including implied warranties of merchantability, non-infringement, fitness for a particular purpose, or title, related to the material. IN NO EVENT WILL ANY STEERING MEMBER, GENERAL MEMBER, OR CONTRIBUTOR BE LIABLE TO ANY OTHER PARTY FOR LOST PROFITS OR ANY FORM OF INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES OF ANY CHARACTER FROM ANY CAUSES OF ACTION OF ANY KIND WITH RESPECT TO THIS AGREEMENT, WHETHER BASED ON BREACH OF CONTRACT, TORT (INCLUDING NEGLIGENCE), OR OTHERWISE, AND WHETHER OR NOT THE OTHER MEMBER HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

10. Use of Name or Marks.

- 10.1. Participant Name or Marks. The Project may use any Steering Member's, General Member's, and Contributor's logo, trademark or service mark to identify the party as a Project member. All other uses are subject to that party's express prior written authorization.
- 10.2. Project Identification. Projects may identify themselves as a Joint Development Foundation Project. The Project must use the formal Project name in all legal transactions.
- 10.3. Approved Deliverable Identification. Any Working Group use of a Project trademark, including for Approved Deliverables, must be Approved by the Steering Committee.

- 10.4. Joint Development Foundation Listing. The Joint Development Foundation may publicly identify the Project, including its member list, as a Joint Development Foundation Project, unless the Chairperson otherwise notifies the Joint Development Foundation Chairperson in writing.
11. Non-Confidential, Restricted Disclosure. Information disclosed in connection with the Project and any Working Group activity, including but not limited to meetings, Contributions, and submissions, is not confidential, regardless of any markings or statements to the contrary. Notwithstanding the foregoing, Steering Members, General Members, and Contributors may not make any public disclosures of that information without the Approval of the Steering Committee or Working Group, as applicable, authorizing that disclosure.
12. Disclaimers for Distributions. Any distributions of technical information to third parties must include a notice materially similar to the following: "THESE MATERIALS ARE PROVIDED "AS IS." The parties expressly disclaim any warranties (express, implied, or otherwise), including implied warranties of merchantability, non-infringement, fitness for a particular purpose, or title, related to the materials. The entire risk as to implementing or otherwise using the materials is assumed by the implementer and user. IN NO EVENT WILL THE PARTIES BE LIABLE TO ANY OTHER PARTY FOR LOST PROFITS OR ANY FORM OF INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES OF ANY CHARACTER FROM ANY CAUSES OF ACTION OF ANY KIND WITH RESPECT TO THIS DELIVERABLE OR ITS GOVERNING AGREEMENT, WHETHER BASED ON BREACH OF CONTRACT, TORT (INCLUDING NEGLIGENCE), OR OTHERWISE, AND WHETHER OR NOT THE OTHER MEMBER HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGE."
13. Antitrust. The Steering Members, General Members, and Contributors acknowledge that they may compete with one another in various lines of business and that it is therefore imperative that they and their respective representatives act in a manner that does not violate any applicable antitrust laws and regulations. Each Steering Member, General Member, and Contributor may have similar agreements with others. Each Steering Member, General Member, and Contributor may design, develop, manufacture, acquire or market competitive deliverables, products and services, and conduct its business, in whatever way it chooses. No Steering Member, General Member, or Contributor is obligated to announce or market any products or services associated with or based on the Project. Without limiting the generality of the foregoing, the Steering Members, General Members, and Contributors agree not to have any discussion relating to any product pricing, methods or channels of product distribution, division of markets, allocation of customers or any other topic that should not be discussed among competitors.
14. Export Regulations. The Steering Members, General Members, and Contributors acknowledge that export and/or re-export of technical data, computer software, prototypes, technology, software and other materials may be subject to export control laws and regulation. No party will directly or indirectly export across any national boundary, or communicate or transfer to any third party, any such items without first obtaining any and all licenses that may be required from relevant government agency.
15. Code of Conduct. The Project has adopted the terms of the Community Covenant 1.0, available at <https://community-covenant.net/version/1/0/>. To report an issue or concern under this Code of Conduct, contact the Project Chairperson or the Joint Development Foundation General Manager.
16. New Versions of Agreement. Joint Development Foundation Projects, LLC. may develop new versions of the Project Charter and Working Group Charter, which the Steering Committee may adopt to supersede the current Project Charter and Working Group Charter. The new documents will become effective 30 days from the date of Steering Committee Approval.
17. Choice of Law/Venue. This agreement, and the rights of the parties hereunder, shall be construed pursuant to the laws of the State of Delaware (without regard to conflict of laws principles). The state and federal courts of Delaware, U.S.A. shall have jurisdiction and the parties waive any other jurisdiction.
18. Definitions. Definitions are set forth below. Terms not defined in the Project Charter will have the definitions set forth in the applicable Working Group Charter.
- 18.1. "Affiliate" means an entity that directly or indirectly Controls, is Controlled by, or is under common Control of that Steering Member, General Member, or Contributor.
- 18.2. "Approval," "Approve," or "Approved" means a decision made pursuant to Section 4.1.
- 18.3. "Contributor" means a party, and that party's Affiliates, that has executed this Project Charter at the Contributor level, unless that Contributor has withdrawn or been terminated from the Project, or has changed membership level.
- 18.4. "Control" means direct or indirect control of more than 50% of the voting stock or decision-making authority.
- 18.5. "General Member" means a party, and that party's Affiliates, that has executed this Project Charter at the General Member level, unless that General Member has withdrawn or been terminated from the Project, or has changed membership level.

- 18.6. "Join or Joined" means that a party has entered into a Membership Agreement for this Project and that has agreed to be bound by the terms of a Working Group Charter by making a Contribution to the Working Group or adding its name to the Working Group's member list.
- 18.7. "Project" means the name of the Project set forth in Section 1 that is established under this Project Charter as a Joint Development Foundation Projects, LLC series.
- 18.8. "Series Agreement" means the agreement that establishes the Series under Joint Development Foundation Projects, LLC that this Project operates under.
- 18.9. "Steering Member" means a party, and that party's Affiliates, that has executed the Membership Agreement for this Project either 1) as a Steering Member, or 2) who has joined the Steering Committee in response to the Steering Committee's nomination, as applicable per the Steering Committee composition election in the Membership Agreement, unless that Steering Member has withdrawn or been terminated from the Project, or has changed membership level.
- 18.10. "Supermajority Vote" means an affirmative vote of no less than 3/4 of Steering Members or Working Group Participants, as applicable, that have attended/participated in at least 50% of the last 4 meetings of the group conducting the vote, where each Steering Member or Working Group Participant will receive only 1 vote regardless of how many individuals from that party participate. To ensure the group is capable of making decisions, the voting requirement for attendance/participation of at least 50% of the last 4 meetings shall be waived if there have not yet been 4 meetings.
- 18.11. "Working Group" means a working group established under this Project via a Working Group Charter to develop materials within the Scope. Each Working Group must have a Scope.
- 18.12. "Working Group Participant" means a Steering Member, General Member, or Contributor who has Joined a Working Group.

Working Group Charter

This Working Group Charter establishes the Scope and intellectual property terms used to develop the materials identified in this Working Group Charter for the Project. Only Project Steering Members, General Members, and Contributors, as applicable, that Joined the Working Group Charter will be bound by its terms and be permitted to participate in this Working Group.

1. Working Group Name. **Physical Layer Working Group**

2. Working Group Deliverables. This Working Group will create: **[Check Specification, Source Code, and/or Dataset]**

- Specifications. There are two options for specification development. The “Community Specification” mode is designed specifically for a repository-based workflow that is familiar to developers while incorporating specification development due process and best practices. The “Traditional mode uses a governance model that is based on traditional approaches to standards and specification development. The Traditional mode includes a choice of copyright and patent licensing options so you may select the options best suited to your goals.

[Check Community Specification Mode or Traditional Mode]

Community Specification Mode.

1. Governance. The Working Group will operate in accordance with terms and policies of the Community Specification materials set forth at <https://github.com/CommunitySpecification/1.0>.
2. Working Group Scope. As set forth in the Working Group repository’s Scope.md file.

■ Traditional Mode.

1. Governance. Traditional Mode uses the governance rules as set forth in Appendix A.
2. Working Group Scope. **Develop specifications that enhance the performance, latency and management of the Ethernet physical layer, the underlying medium and physical layer clients (link layer).**
3. Copyright Licensing. Each Working Group must specify the copyright mode under which it will operate prior to initiating any work on any Draft Deliverable or Approved Deliverable other than source code or datasets. The copyright mode for this Working Group is: **[Check one box]**
 - Copyright Grant to Project, as set forth in Appendix B, Copyright Policy Option 1.
 - Creative Commons Attribution 4.0, as set forth in Appendix B, Copyright Policy Option 2.
 - Open Web Foundation 1.0. (Only for those Working Groups selecting the Open Web Foundation mode for patent licensing).
4. Patent Licensing. Each Working Group must specify the patent mode under which it will operate prior to initiating any work on any Draft Deliverable or Approved Deliverable other than source code or datasets. The patent mode for this Working Group is: **[Check one box]**
 - RAND Royalty-Free Mode, as set forth in Appendix B, Patent Policy Option 1.
 - International Mode, as set forth in Appendix B, Patent Policy Option 2.
 - Open Web Foundation Agreement 1.0 Mode, as set forth in Appendix B, Patent Policy Option 3.

- W3C Mode, as set forth in Appendix B, Patent Policy Option 4.
 - RAND Mode, as set forth in Appendix B, Patent Policy Option 5.
 - No Patent License. No patent licenses are granted for the Draft Deliverables or Approved Deliverables developed by this Working Group.
- Source Code. Working Group Participants contributing source code to this Working Group agree that those source code contributions are subject to the Developer Certificate of Origin version 1.1, available at <http://developercertificate.org/>, the license indicated below, and any policies and governance rules included in the source code's repository. Source code may not be a required element of an Approved Deliverable specification. **[Check one box]**
- Apache 2.0, available at <http://www.apache.org/licenses/LICENSE-2.0.html>.
 - MIT License, available at <https://opensource.org/licenses/MIT>.
 - Mozilla Public License 2.0, available at <https://www.mozilla.org/MPL/2.0/>.
 - Other _____.
- Dataset. Datasets are developed under the governance rules as set forth in Appendix A. Working Group Participants contributing data to a dataset to this Working Group agree that those data contributions are subject to the license indicated below. The dataset may not be a required element of an Approved Deliverable specification. **[Check one box]**
- CDLA-Permissive-1.0.
 - CC0 1.0.
 - Open-Use-of-Data-Agreement.
 - CDLA-Sharing-1.0.
 - Computational-Use-of-Data-Agreement.
 - Other _____.
3. Non-Working Group Participant Feedback and Participation. Upon the Approval of the Working Group Participants, the Working Group can request feedback from and/or allow Non-Working Group Participant participation in a Working Group, subject to each Non-Working Group Participant executing the Non-Member Agreement set forth in Appendix C.

By making a Contribution to this Working Group or adding its name to this Working Group's member list, the member agrees to the terms of this Working Group Charter.

Working Group Charter

This Working Group Charter establishes the Scope and intellectual property terms used to develop the materials identified in this Working Group Charter for the Project. Only Project Steering Members, General Members, and Contributors, as applicable, that Joined the Working Group Charter will be bound by its terms and be permitted to participate in this Working Group.

1. Working Group Name. **Link Layer Working Group**

2. Working Group Deliverables. This Working Group will create: **[Check Specification, Source Code, and/or Dataset]**

- Specifications. There are two options for specification development. The “Community Specification” mode is designed specifically for a repository-based workflow that is familiar to developers while incorporating specification development due process and best practices. The “Traditional mode uses a governance model that is based on traditional approaches to standards and specification development. The Traditional mode includes a choice of copyright and patent licensing options so you may select the options best suited to your goals.

[Check Community Specification Mode or Traditional Mode]

□ Community Specification Mode.

1. Governance. The Working Group will operate in accordance with terms and policies of the Community Specification materials set forth at <https://github.com/CommunitySpecification/1.0>.
2. Working Group Scope. As set forth in the Working Group repository’s Scope.md file.

■ Traditional Mode.

1. Governance. Traditional Mode uses the governance rules as set forth in Appendix A.
2. Working Group Scope. **Develop specifications that enhance the performance, latency and management of the Ethernet link layer. Areas of development will include:**
 - Negotiation of capabilities: link level exchange of capabilities supported, such as any optional capabilities the link might support, and any additional vendor specific capabilities.
 - Link level reliability enhancements: this includes, but is not limited to, link-level retry.
 - Efficiency improvements for short packets: this includes reduced framing overhead (e.g. making the Ethernet header optional with a link peer), and interfaces to the physical layer to leverage physical layer improvements (e.g. any interfaces needed to uses a shorter interframe gap or shorter preamble).
 - Mechanisms and formats to encode control packets on the link: this includes both control packets needed for the enhanced link layer operation, as well as control packet formats that can be used by vendors to communicate additional vendor specific information.
 - Fine Grained Congestion Notifications: this includes signaling mechanisms intended to provide finer grained back-pressure (i.e. finer grained than the current per PFC PAUSE mechanisms).
 - Credit based flow control: this includes mechanisms to manage credits on a per-class basis to reduce buffering requirements currently associated with PAUSE based flow control. It includes both how a class is selected (may leverage PFC or may leverage something new) as well as how credits are exchanged between devices.
3. Copyright Licensing. Each Working Group must specify the copyright mode under which it will operate prior to initiating any work on any Draft Deliverable or Approved Deliverable other than source code or datasets. The copyright mode for this Working Group is: **[Check one box]**

- Copyright Grant to Project, as set forth in Appendix B, Copyright Policy Option 1.

- Creative Commons Attribution 4.0, as set forth in Appendix B, Copyright Policy Option 2.

- Open Web Foundation 1.0. (Only for those Working Groups selecting the Open Web Foundation mode for patent licensing).

4. Patent Licensing. Each Working Group must specify the patent mode under which it will operate prior to initiating any work on any Draft Deliverable or Approved Deliverable other than source code or datasets. The patent mode for this Working Group is: **[Check one box]**

- RAND Royalty-Free Mode, as set forth in Appendix B, Patent Policy Option 1.
- International Mode, as set forth in Appendix B, Patent Policy Option 2.
- Open Web Foundation Agreement 1.0 Mode, as set forth in Appendix B, Patent Policy Option 3.
- W3C Mode, as set forth in Appendix B, Patent Policy Option 4.
- RAND Mode, as set forth in Appendix B, Patent Policy Option 5.
- No Patent License. No patent licenses are granted for the Draft Deliverables or Approved Deliverables developed by this Working Group.

Source Code. Working Group Participants contributing source code to this Working Group agree that those source code contributions are subject to the Developer Certificate of Origin version 1.1, available at <http://developercertificate.org/>, the license indicated below, and any policies and governance rules included in the source code's repository. Source code may not be a required element of an Approved Deliverable specification. **[Check one box]**

- Apache 2.0, available at <http://www.apache.org/licenses/LICENSE-2.0.html>.
- MIT License, available at <https://opensource.org/licenses/MIT>.
- Mozilla Public License 2.0, available at <https://www.mozilla.org/MPL/2.0/>.
- Other _____.

Dataset. Datasets are developed under the governance rules as set forth in Appendix A. Working Group Participants contributing data to a dataset to this Working Group agree that those data contributions are subject to the license indicated below. The dataset may not be a required element of an Approved Deliverable specification. **[Check one box]**

- CDLA-Permissive-1.0.
- CC0 1.0.
- Open-Use-of-Data-Agreement.
- CDLA-Sharing-1.0.
- Computational-Use-of-Data-Agreement.
- Other _____.

3. Non-Working Group Participant Feedback and Participation. Upon the Approval of the Working Group Participants, the Working Group can request feedback from and/or allow Non-Working Group Participant participation in a Working Group, subject to each Non-Working Group Participant executing the Non-Member Agreement set forth in Appendix C.

By making a Contribution to this Working Group or adding its name to this Working Group's member list, the member agrees to the terms of this Working Group Charter.

Working Group Charter

This Working Group Charter establishes the Scope and intellectual property terms used to develop the materials identified in this Working Group Charter for the Project. Only Project Steering Members, General Members, and Contributors, as applicable, that Joined the Working Group Charter will be bound by its terms and be permitted to participate in this Working Group.

1. Working Group Name. **Transport Layer Working Group**
2. Working Group Deliverables. This Working Group will create: **[Check Specification, Source Code, and/or Dataset]**
 - Specifications. There are two options for specification development. The “Community Specification” mode is designed specifically for a repository-based workflow that is familiar to developers while incorporating specification development due process and best practices. The “Traditional mode uses a governance model that is based on traditional approaches to standards and specification development. The Traditional mode includes a choice of copyright and patent licensing options so you may select the options best suited to your goals.
 - Community Specification Mode.
 1. Governance. The Working Group will operate in accordance with terms and policies of the Community Specification materials set forth at <https://github.com/CommunitySpecification/1.0>.
 2. Working Group Scope. As set forth in the Working Group repository’s Scope.md file.
 - ☒ Traditional Mode.
 1. Governance. Traditional Mode uses the governance rules as set forth in Appendix A.
 2. Working Group Scope. **Develop specifications for an AI/HPC transport with enhanced throughput, latency, scalability, and management for Ethernet networks. The scope includes:**
 - Definition of a transport protocol including end-to-end congestion avoidance and control, flow control, multi-pathing, reliability, data integrity and security
 - Definition of supported network transactions including their functional semantics, packet format and optionality. The transaction set may include remote memory access, message send/receive, atomics, or collective operations
 - Interaction of the transport protocol with other networking protocols and technologies such as data encryption, tunneling, telemetry, etc.
 - Definition of mechanisms to manage variations across protocol revisions and product implementations while maintaining inter-operability at a baseline level including negotiation of supported features
 3. Copyright Licensing. Each Working Group must specify the copyright mode under which it will operate prior to initiating any work on any Draft Deliverable or Approved Deliverable other than source code or datasets. The copyright mode for this Working Group is: **[Check one box]**
 - Copyright Grant to Project, as set forth in Appendix B, Copyright Policy Option 1.
 - Creative Commons Attribution 4.0, as set forth in Appendix B, Copyright Policy Option 2.
 - Open Web Foundation 1.0. (Only for those Working Groups selecting the Open Web Foundation mode for patent licensing).

4. Patent Licensing. Each Working Group must specify the patent mode under which it will operate prior to initiating any work on any Draft Deliverable or Approved Deliverable other than source code or datasets. The patent mode for this Working Group is: **[Check one box]**

- RAND Royalty-Free Mode, as set forth in Appendix B, Patent Policy Option 1.
- International Mode, as set forth in Appendix B, Patent Policy Option 2.
- Open Web Foundation Agreement 1.0 Mode, as set forth in Appendix B, Patent Policy Option 3.
- W3C Mode, as set forth in Appendix B, Patent Policy Option 4.
- RAND Mode, as set forth in Appendix B, Patent Policy Option 5.
- No Patent License. No patent licenses are granted for the Draft Deliverables or Approved Deliverables developed by this Working Group.

Source Code. Working Group Participants contributing source code to this Working Group agree that those source code contributions are subject to the Developer Certificate of Origin version 1.1, available at <http://developercertificate.org/>, the license indicated below, and any policies and governance rules included in the source code's repository. Source code may not be a required element of an Approved Deliverable specification. **[Check one box]**

- Apache 2.0, available at <http://www.apache.org/licenses/LICENSE-2.0.html>.
- MIT License, available at <https://opensource.org/licenses/MIT>.
- Mozilla Public License 2.0, available at <https://www.mozilla.org/MPL/2.0/>.
- Other _____.

Dataset. Datasets are developed under the governance rules as set forth in Appendix A. Working Group Participants contributing data to a dataset to this Working Group agree that those data contributions are subject to the license indicated below. The dataset may not be a required element of an Approved Deliverable specification. **[Check one box]**

- CDLA-Permissive-1.0.
- CC0 1.0.
- Open-Use-of-Data-Agreement.
- CDLA-Sharing-1.0.
- Computational-Use-of-Data-Agreement.
- Other _____.

3. Non-Working Group Participant Feedback and Participation. Upon the Approval of the Working Group Participants, the Working Group can request feedback from and/or allow Non-Working Group Participant participation in a Working Group, subject to each Non-Working Group Participant executing the Non-Member Agreement set forth in Appendix C.

By making a Contribution to this Working Group or adding its name to this Working Group's member list, the member agrees to the terms of this Working Group Charter.

Working Group Charter

This Working Group Charter establishes the Scope and intellectual property terms used to develop the materials identified in this Working Group Charter for the Project. Only Project Steering Members, General Members, and Contributors, as applicable, that Joined the Working Group Charter will be bound by its terms and be permitted to participate in this Working Group.

1. Working Group Name. **Software Working Group**
2. Working Group Deliverables. This Working Group will create: **[Check Specification, Source Code, and/or Dataset]**
 - Specifications. There are two options for specification development. The “Community Specification” mode is designed specifically for a repository-based workflow that is familiar to developers while incorporating specification development due process and best practices. The “Traditional mode uses a governance model that is based on traditional approaches to standards and specification development. The Traditional mode includes a choice of copyright and patent licensing options so you may select the options best suited to your goals.
 - Community Specification Mode.
 1. Governance. The Working Group will operate in accordance with terms and policies of the Community Specification materials set forth at <https://github.com/CommunitySpecification/1.0>.
 2. Working Group Scope. As set forth in the Working Group repository’s Scope.md file.
 - ☒ Traditional Mode.
 1. Governance. Traditional Mode uses the governance rules as set forth in Appendix A.
 2. Working Group Scope. **Develop specifications and /or software API and /or open-source code for various AI/HPC use cases/applications. Scope includes but is not limited to: remote memory access optimizations, In Network Computations (INC) as well as security, management and storage. The scope includes:**
 - Definition of CPU, GPU and processors’ optimized APIs enabling optimized remote memory access operations and Atomics, optimized for HPC/AI applications.
 - Definition of in network computing APIs and code to enable popular HPC and AI Collective operations to be centrally handled by a network device/s
 - Definition of mechanisms to manage variations across protocol revisions and product implementations while maintaining inter-operability at a baseline level including negotiation of supported features
 - The WG will also consider additional APIs, e.g., NOS extensions, SDN API extensions in support of the specifications, software APIs and use cases addressed and promoted by the consortium.
 3. Copyright Licensing. Each Working Group must specify the copyright mode under which it will operate prior to initiating any work on any Draft Deliverable or Approved Deliverable other than source code or datasets. The copyright mode for this Working Group is: **[Check one box]**
 - Copyright Grant to Project, as set forth in Appendix B, Copyright Policy Option 1.
 - Creative Commons Attribution 4.0, as set forth in Appendix B, Copyright Policy Option 2.
 - Open Web Foundation 1.0. (Only for those Working Groups selecting the Open Web Foundation mode for patent licensing).

4. Patent Licensing. Each Working Group must specify the patent mode under which it will operate prior to initiating any work on any Draft Deliverable or Approved Deliverable other than source code or datasets. The patent mode for this Working Group is: **[Check one box]**

- RAND Royalty-Free Mode, as set forth in Appendix B, Patent Policy Option 1.
- International Mode, as set forth in Appendix B, Patent Policy Option 2.
- Open Web Foundation Agreement 1.0 Mode, as set forth in Appendix B, Patent Policy Option 3.
- W3C Mode, as set forth in Appendix B, Patent Policy Option 4.
- RAND Mode, as set forth in Appendix B, Patent Policy Option 5.
- No Patent License. No patent licenses are granted for the Draft Deliverables or Approved Deliverables developed by this Working Group.

■ Source Code. Working Group Participants contributing source code to this Working Group agree that those source code contributions are subject to the Developer Certificate of Origin version 1.1, available at <http://developercertificate.org/>, the license indicated below, and any policies and governance rules included in the source code's repository. Source code may not be a required element of an Approved Deliverable specification. **[Check one box]**

- Apache 2.0, available at <http://www.apache.org/licenses/LICENSE-2.0.html>.
- MIT License, available at <https://opensource.org/licenses/MIT>.
- Mozilla Public License 2.0, available at <https://www.mozilla.org/MPL/2.0/>.

■ Other MIT License by default unless another license is approved by the Steering Committee.

Dataset. Datasets are developed under the governance rules as set forth in Appendix A. Working Group Participants contributing data to a dataset to this Working Group agree that those data contributions are subject to the license indicated below. The dataset may not be a required element of an Approved Deliverable specification. **[Check one box]**

- CDLA-Permissive-1.0.
- CC0 1.0.
- Open-Use-of-Data-Agreement.
- CDLA-Sharing-1.0.
- Computational-Use-of-Data-Agreement.
- Other _____.

3. Non-Working Group Participant Feedback and Participation. Upon the Approval of the Working Group Participants, the Working Group can request feedback from and/or allow Non-Working Group Participant participation in a Working Group, subject to each Non-Working Group Participant executing the Non-Member Agreement set forth in Appendix C.

By making a Contribution to this Working Group or adding its name to this Working Group's member list, the member agrees to the terms of this Working Group Charter.

Working Group Charter

This Working Group Charter establishes the Scope and intellectual property terms used to develop the materials identified in this Working Group Charter for the Project. Only Project Steering Members, General Members, and Contributors, as applicable, that Joined the Working Group Charter will be bound by its terms and be permitted to participate in this Working Group.

1. Working Group Name. **Storage Working Group**

2. Working Group Deliverables. This Working Group will create: **[Check Specification, Source Code, and/or Dataset]**

- Specifications. There are two options for specification development. The “Community Specification” mode is designed specifically for a repository-based workflow that is familiar to developers while incorporating specification development due process and best practices. The “Traditional mode uses a governance model that is based on traditional approaches to standards and specification development. The Traditional mode includes a choice of copyright and patent licensing options so you may select the options best suited to your goals.

Community Specification Mode.

1. Governance. The Working Group will operate in accordance with terms and policies of the Community Specification materials set forth at <https://github.com/CommunitySpecification/1.0>.
2. Working Group Scope. As set forth in the Working Group repository’s Scope.md file.

Traditional Mode.

1. Governance. Traditional Mode uses the governance rules as set forth in Appendix A.
2. Working Group Scope. **Develop specifications that support Storage traffic on UltraEthernet for AI and HPC workloads. Areas of development will include:**
 - Best effort to integrate with existing UEC evolving specification in other work groups.
 - Physical connections and transceivers: integration and/or interoperability industry-compatible physical interconnects.
 - Negotiation of capabilities: link level exchange of capabilities supported. Storage types of interest include, but not limited to local storage, remote storage, accelerator direct interaction, QoS.
 - Mechanisms and formats to encode Storage packets: this includes both control packets needed for establishing and maintaining storage service, as well as data packet formats.
 - Transport services: integration with the UEC congestion management, routing, reliability, QoS and use of lossy or lossless services, bindings for upper layer protocols with such requirements.
 - Security: integration with the UEC security mechanisms.
 - Software: RDMA API (including User and/or Kernel) and interaction with industry established Storage APIs in collaboration with the software workgroup.
 - Management: integration into UEC management and into industry established storage management.
 - Future storage services: support of emerging storage services e.g., new storage computations and memory data movement.
3. Copyright Licensing. Each Working Group must specify the copyright mode under which it will operate prior to initiating any work on any Draft Deliverable or Approved Deliverable other than source code or datasets. The copyright mode for this Working Group is: **[Check one box]**

3. Non-Working Group Participant Feedback and Participation. Upon the Approval of the Working Group Participants, the Working Group can request feedback from and/or allow Non-Working Group Participant participation in a Working Group, subject to each Non-Working Group Participant executing the Non-Member Agreement set forth in Appendix C.

By making a Contribution to this Working Group or adding its name to this Working Group's member list, the member agrees to the terms of this Working Group Charter.

Non Executable

Working Group Charter

This Working Group Charter establishes the Scope and intellectual property terms used to develop the materials identified in this Working Group Charter for the Project. Only Project Steering Members, General Members, and Contributors, as applicable, that Joined the Working Group Charter will be bound by its terms and be permitted to participate in this Working Group.

1. Working Group Name. **Compliance Working Group**
2. Working Group Deliverables. This Working Group will create: **[Check Specification, Source Code, and/or Dataset]**
 - Specifications. There are two options for specification development. The “Community Specification” mode is designed specifically for a repository-based workflow that is familiar to developers while incorporating specification development due process and best practices. The “Traditional mode uses a governance model that is based on traditional approaches to standards and specification development. The Traditional mode includes a choice of copyright and patent licensing options so you may select the options best suited to your goals.
 - Community Specification Mode.
 1. Governance. The Working Group will operate in accordance with terms and policies of the Community Specification materials set forth at <https://github.com/CommunitySpecification/1.0>.
 2. Working Group Scope. As set forth in the Working Group repository’s Scope.md file.
 - ☒ Traditional Mode.
 1. Governance. Traditional Mode uses the governance rules as set forth in Appendix A.
 2. Working Group Scope. **Develop specifications and software (including API) that define compliance to UEC specifications, for AI and HPC workloads. Areas of development will include:**
 - Define sets of specifications and tests to allow testing a given implementation support of UEC specs per ratified specification and supported profile/s. Develop test cases to validate the aforementioned.
 3. Copyright Licensing. Each Working Group must specify the copyright mode under which it will operate prior to initiating any work on any Draft Deliverable or Approved Deliverable other than source code or datasets. The copyright mode for this Working Group is: **[Check one box]**
 - Copyright Grant to Project, as set forth in Appendix B, Copyright Policy Option 1.
 - Creative Commons Attribution 4.0, as set forth in Appendix B, Copyright Policy Option 2.
 - Open Web Foundation 1.0. (Only for those Working Groups selecting the Open Web Foundation mode for patent licensing).
 4. Patent Licensing. Each Working Group must specify the patent mode under which it will operate prior to initiating any work on any Draft Deliverable or Approved Deliverable other than source code or datasets. The patent mode for this Working Group is: **[Check one box]**
 - RAND Royalty-Free Mode, as set forth in Appendix B, Patent Policy Option 1.
 - International Mode, as set forth in Appendix B, Patent Policy Option 2.

- Open Web Foundation Agreement 1.0 Mode, as set forth in Appendix B, Patent Policy Option 3.
 - W3C Mode, as set forth in Appendix B, Patent Policy Option 4.
 - RAND Mode, as set forth in Appendix B, Patent Policy Option 5.
 - No Patent License. No patent licenses are granted for the Draft Deliverables or Approved Deliverables developed by this Working Group.
- Source Code. Working Group Participants contributing source code to this Working Group agree that those source code contributions are subject to the Developer Certificate of Origin version 1.1, available at <http://developercertificate.org/>, the license indicated below, and any policies and governance rules included in the source code's repository. Source code may not be a required element of an Approved Deliverable specification. **[Check one box]**
- Apache 2.0, available at <http://www.apache.org/licenses/LICENSE-2.0.html>.
 - MIT License, available at <https://opensource.org/licenses/MIT>.
 - Mozilla Public License 2.0, available at <https://www.mozilla.org/MPL/2.0/>.
 - Other MIT License by default unless another license is approved by the Steering Committee.
- Dataset. Datasets are developed under the governance rules as set forth in Appendix A. Working Group Participants contributing data to a dataset to this Working Group agree that those data contributions are subject to the license indicated below. The dataset may not be a required element of an Approved Deliverable specification. **[Check one box]**
- CDLA-Permissive-1.0.
 - CC0 1.0.
 - Open-Use-of-Data-Agreement.
 - CDLA-Sharing-1.0.
 - Computational-Use-of-Data-Agreement.
 - Other _____.
3. Non-Working Group Participant Feedback and Participation. Upon the Approval of the Working Group Participants, the Working Group can request feedback from and/or allow Non-Working Group Participant participation in a Working Group, subject to each Non-Working Group Participant executing the Non-Member Agreement set forth in Appendix C.

By making a Contribution to this Working Group or adding its name to this Working Group's member list, the member agrees to the terms of this Working Group Charter.

Working Group Charter

This Working Group Charter establishes the Scope and intellectual property terms used to develop the materials identified in this Working Group Charter for the Project. Only Project Steering Members, General Members, and Contributors, as applicable, that Joined the Working Group Charter will be bound by its terms and be permitted to participate in this Working Group.

1. Working Group Name. **Management Working Group**
2. Working Group Deliverables. This Working Group will create: ***[Check Specification, Source Code, and/or Dataset]***
 - Specifications. There are two options for specification development. The “Community Specification” mode is designed specifically for a repository-based workflow that is familiar to developers while incorporating specification development due process and best practices. The “Traditional mode uses a governance model that is based on traditional approaches to standards and specification development. The Traditional mode includes a choice of copyright and patent licensing options so you may select the options best suited to your goals.
 - Community Specification Mode.
 1. Governance. The Working Group will operate in accordance with terms and policies of the Community Specification materials set forth at <https://github.com/CommunitySpecification/1.0>.
 2. Working Group Scope. As set forth in the Working Group repository’s Scope.md file.
 - ☒ Traditional Mode.
 1. Governance. Traditional Mode uses the governance rules as set forth in Appendix A.
 2. Working Group Scope. **Develop specifications and software (including API) for UEC fabric manageability. Areas of development will include:**
 - Best effort to integrate with existing UEC evolving specification in other work groups.
 - Management framework elements: define management elements and mechanisms that may include topology discovery, capability discovery, and monitoring.
 - Management RPCs: define management RPCs including their functional semantics, format, and optionality. RPC must also support security as an option.
 - Switch and/or FEP management: define management models for UEC fabric switch and/or FEP management.
 - Interoperability verification: define capability query/ies for interop amongst UEC fabric components.
 3. Copyright Licensing. Each Working Group must specify the copyright mode under which it will operate prior to initiating any work on any Draft Deliverable or Approved Deliverable other than source code or datasets. The copyright mode for this Working Group is: ***[Check one box]***
 - Copyright Grant to Project, as set forth in Appendix B, Copyright Policy Option 1.
 - Creative Commons Attribution 4.0, as set forth in Appendix B, Copyright Policy Option 2.
 - Open Web Foundation 1.0. (Only for those Working Groups selecting the Open Web Foundation mode for patent licensing).

4. **Patent Licensing.** Each Working Group must specify the patent mode under which it will operate prior to initiating any work on any Draft Deliverable or Approved Deliverable other than source code or datasets. The patent mode for this Working Group is: **[Check one box]**

- RAND Royalty-Free Mode, as set forth in Appendix B, Patent Policy Option 1.
- International Mode, as set forth in Appendix B, Patent Policy Option 2.
- Open Web Foundation Agreement 1.0 Mode, as set forth in Appendix B, Patent Policy Option 3.
- W3C Mode, as set forth in Appendix B, Patent Policy Option 4.
- RAND Mode, as set forth in Appendix B, Patent Policy Option 5.
- No Patent License. No patent licenses are granted for the Draft Deliverables or Approved Deliverables developed by this Working Group.

■ **Source Code.** Working Group Participants contributing source code to this Working Group agree that those source code contributions are subject to the Developer Certificate of Origin version 1.1, available at <http://developercertificate.org/>, the license indicated below, and any policies and governance rules included in the source code's repository. Source code may not be a required element of an Approved Deliverable specification. **[Check one box]**

- Apache 2.0, available at <http://www.apache.org/licenses/LICENSE-2.0.html>.
- MIT License, available at <https://opensource.org/licenses/MIT>.
- Mozilla Public License 2.0, available at <https://www.mozilla.org/MPL/2.0/>.

■ **Other** MIT License by default unless another license is approved by the Steering Committee.

Dataset. Datasets are developed under the governance rules as set forth in Appendix A. Working Group Participants contributing data to a dataset to this Working Group agree that those data contributions are subject to the license indicated below. The dataset may not be a required element of an Approved Deliverable specification. **[Check one box]**

- CDLA-Permissive-1.0.
- CC0 1.0.
- Open-Use-of-Data-Agreement.
- CDLA-Sharing-1.0.
- Computational-Use-of-Data-Agreement.

Other _____

3. **Non-Working Group Participant Feedback and Participation.** Upon the Approval of the Working Group Participants, the Working Group can request feedback from and/or allow Non-Working Group Participant participation in a Working Group, subject to each Non-Working Group Participant executing the Non-Member Agreement set forth in Appendix C.

By making a Contribution to this Working Group or adding its name to this Working Group's member list, the member agrees to the terms of this Working Group Charter.

Working Group Charter

This Working Group Charter establishes the Scope and intellectual property terms used to develop the materials identified in this Working Group Charter for the Project. Only Project Steering Members, General Members, and Contributors, as applicable, that Joined the Working Group Charter will be bound by its terms and be permitted to participate in this Working Group.

1. Working Group Name. **Performance and Debug Working Group**
2. Working Group Deliverables. This Working Group will create: **[Check Specification, Source Code, and/or Dataset]**
 - Specifications. There are two options for specification development. The “Community Specification” mode is designed specifically for a repository-based workflow that is familiar to developers while incorporating specification development due process and best practices. The “Traditional mode uses a governance model that is based on traditional approaches to standards and specification development. The Traditional mode includes a choice of copyright and patent licensing options so you may select the options best suited to your goals.
 - Community Specification Mode.
 1. Governance. The Working Group will operate in accordance with terms and policies of the Community Specification materials set forth at <https://github.com/CommunitySpecification/1.0>.
 2. Working Group Scope. As set forth in the Working Group repository’s Scope.md file.
 - ☒ Traditional Mode.
 1. Governance. Traditional Mode uses the governance rules as set forth in Appendix A.
 2. Working Group Scope. **Develop specifications and software (including API) for setting performance targets and benchmarks and provide for debug features for AI and HPC workloads. Areas of development will include:**
 - Best effort to integrate with existing UEC evolving specification in other work groups.
 - Performance: define sets of specifications that define the performance metrics along with test/s or microbenchmarks and/or a benchmark running AI or HPC workload.
 - Debug: define sets of specifications with required and recommended feature/s that improve UEC compliant implementations visibility and debuggability. Develop test cases and software to validate the aforementioned.
 3. Copyright Licensing. Each Working Group must specify the copyright mode under which it will operate prior to initiating any work on any Draft Deliverable or Approved Deliverable other than source code or datasets. The copyright mode for this Working Group is: **[Check one box]**
 - Copyright Grant to Project, as set forth in Appendix B, Copyright Policy Option 1.
 - Creative Commons Attribution 4.0, as set forth in Appendix B, Copyright Policy Option 2.
 - Open Web Foundation 1.0. (Only for those Working Groups selecting the Open Web Foundation mode for patent licensing).
 4. Patent Licensing. Each Working Group must specify the patent mode under which it will operate prior to initiating any work on any Draft Deliverable or Approved Deliverable other than source code or datasets. The patent mode for this Working Group is: **[Check one box]**

- RAND Royalty-Free Mode, as set forth in Appendix B, Patent Policy Option 1.
 - International Mode, as set forth in Appendix B, Patent Policy Option 2.
 - Open Web Foundation Agreement 1.0 Mode, as set forth in Appendix B, Patent Policy Option 3.
 - W3C Mode, as set forth in Appendix B, Patent Policy Option 4.
 - RAND Mode, as set forth in Appendix B, Patent Policy Option 5.
 - No Patent License. No patent licenses are granted for the Draft Deliverables or Approved Deliverables developed by this Working Group.
- Source Code. Working Group Participants contributing source code to this Working Group agree that those source code contributions are subject to the Developer Certificate of Origin version 1.1, available at <http://developercertificate.org/>, the license indicated below, and any policies and governance rules included in the source code's repository. Source code may not be a required element of an Approved Deliverable specification. **[Check one box]**
- Apache 2.0, available at <http://www.apache.org/licenses/LICENSE-2.0.html>.
 - MIT License, available at <https://opensource.org/licenses/MIT>.
 - Mozilla Public License 2.0, available at <https://www.mozilla.org/MPL/2.0/>.
 - Other MIT License by default unless another license is approved by the Steering Committee.
- Dataset. Datasets are developed under the governance rules as set forth in Appendix A. Working Group Participants contributing data to a dataset to this Working Group agree that those data contributions are subject to the license indicated below. The dataset may not be a required element of an Approved Deliverable specification. **[Check one box]**
- CDLA-Permissive-1.0.
 - CC0 1.0.
 - Open-Use-of-Data-Agreement.
 - CDLA-Sharing-1.0.
 - Computational-Use-of-Data-Agreement.
 - Other _____
3. Non-Working Group Participant Feedback and Participation. Upon the Approval of the Working Group Participants, the Working Group can request feedback from and/or allow Non-Working Group Participant participation in a Working Group, subject to each Non-Working Group Participant executing the Non-Member Agreement set forth in Appendix C.

By making a Contribution to this Working Group or adding its name to this Working Group's member list, the member agrees to the terms of this Working Group Charter.

Appendix A

Traditional Mode Governance

1. Working Group Chair. Each Working Group will designate a chair for that Working Group. A Working Group may select a new chair upon Approval of the Working Group Participants.
2. Working Group Requirements. Each Working Group must be comprised of at least 2 Working Group Participants. No Working Group Participant will be permitted to participate in a Working Group without first Joining the Working Group
3. Working Group Decision Making.
 - 3.1. Consensus/Voting/Approval. The Working Group will endeavor to make all decisions by consensus. Where the Working Group cannot reach consensus with respect to a particular decision, the Working Group will make that decision by a Supermajority Vote of the Steering Members and General Members in this Working Group.
 - 3.2. Appeals. Working Group decisions may be appealed by issuing a written appeal to the Working Group Chair, and that appeal will be considered by the Working Group chair in good faith. The Working Group Chair will respond in writing within a reasonable time.
 - 3.3. Notifications and Electronic Voting. The Working Group Chair is responsible for issuing all notifications of meetings and votes of the Working Group subject to the following minimum criteria: (i) in-person meetings require at least 30 days prior written notice, (ii) teleconference meetings require at least 7 days prior written notice (this requirement only applies to the notification of the first meeting of automatically recurring teleconference meetings), (iii) electronic votes require no advance notice but must be made pursuant to a clear and unambiguous ballot with only “yes” and “no” options, and the voting must remain open for no less than 7 days. These notification requirements with respect to the Project may be overridden upon unanimous consent of all Steering Members and General Members that have attended and participated in at least 50% of the last 4 meetings of the Project.
4. Deliverable Development Process.
 - 4.1. Pre-Draft. Any Working Group Participant or Contributor may submit a proposed initial draft document as a candidate Draft Deliverable of that Working Group. The Working Group chair will designate each submission as a “Pre-Draft” document.
 - 4.2. Draft. Each Pre-Draft document of a Working Group must first be Approved by the Working Group Participants of that Working Group to become a Draft Deliverable. Once the Working Group approves a document as a Draft Deliverable, the Draft Deliverable becomes the basis for all going forward work on that deliverable.
 - 4.3. Working Group Approval. Once a Working Group believes it has achieved the objectives for its deliverable as described in the Scope, it will progress its Draft Deliverable to “Working Group Approved” status.
 - 4.4. Final Approval. Upon a Draft Deliverable reaching Working Group Approved status, the Project Chair or his/her designee will present that Working Group Approved Draft Deliverable to all Steering Committee for Approval. Upon Approval by the Steering Committee, that Draft Deliverable will be designated an “Approved Deliverable.”
 - 4.5. Publication and Submission. Upon the designation of a Draft Deliverable as an Approved Deliverable, the Project Chair will publish the Approved Deliverable in a manner agreed upon by the Working Group Participants (*i.e.*, Project Participant only location, publicly available location, Project maintained website, Project member website, etc.). The publication of an Approved Deliverable in a publicly accessible manner must include the terms under which the Approved Deliverable and/or source code is being made available under, as set forth in the applicable Working Group Charter.
 - 4.6. Submissions to Standards Bodies. No Draft Deliverable or Approved Deliverable may be submitted to another organization without Approval by the Steering Committee. Upon Approval by the Steering Committee, the Project Chair will coordinate the submission of the applicable Draft Deliverable or Approved Deliverable to another standards development organization with Joint Development Foundation Projects, LLC. Working Group Participants that developed that Draft Deliverable or Approved Deliverable agree to grant the copyright rights necessary to make those submissions.
5. Definitions. Definitions are set forth below. Terms not defined in the Working Group Charter will have the definitions set forth in the Project Charter.

- 5.1. “Approved Deliverable” means the final version and contents of any Draft Deliverable approved as an Approved Deliverable as set forth in the Applicable Working Group Charter.
- 5.2. “Contribution” means any material, including any modifications or additions to an existing work, that the Steering Member, General Member, or Contributor submits for inclusion in the Draft Deliverable or Approved Deliverable, which is included in the Draft Deliverable or Approved Deliverable. For the purposes of this definition, “submit” means any form of electronic, oral, or written communication for the purpose of discussing and improving the Draft Deliverable or Approved Deliverable, but excluding communication that the Steering Member, General Member, or Contributor conspicuously designate in writing as not a contribution.
- 5.3. “Draft Deliverable” means all versions of the material (except an Approved Deliverable) developed by a Working Group for the purpose of creating, commenting on, revising, updating, modifying, or adding to any document that is to be considered for inclusion in the Approved Deliverable.
- 5.4. “Scope” means a description of the deliverables that a given Working Group will develop as established by the Working Group in accordance with the that Working Group’s Charter.

Appendix B

Traditional Mode Intellectual Property Policy Options

This document sets for the various options that a Working Group may select via its Working Group Charter for Working Groups operating under the Traditional mode. Working Group Participants are only subject to the options selected for that particular Working Group as designated in the Working Group Charter, and no other rights are granted.

COPYRIGHT POLICY OPTIONS.

Copyright Policy Option 1: Copyright Grant to Foundation.

1. Copyright Grant. Each Working Group Participant grants to the Project a perpetual, worldwide, non-exclusive, no-charge, royalty-free, copyright license, without any obligation for accounting, to reproduce, prepare derivative works of, publicly display, publicly perform, sublicense, and distribute any Contribution made by the Working Group Participant to the full extent of the Working Group Participant's copyright interest in the Contribution.
2. Ownership of Collective Works. By participating in a Working Group, the Working Group Working Group Participant agrees that all copyright created in the collective work belongs to the Project.

Copyright Policy Option 2: Creative Commons Attribution 4.0.

Each Working Group Participant agrees that its Contributions are subject to the Creative Commons Attribution 4.0 International license - <http://creativecommons.org/licenses/by/4.0/legalcode>.

PATENT POLICY OPTIONS.

For Each Patent Policy Option. The assurances provided in the selected patent mode are binding on the Working Group Participant's successors-in-interest. In addition, each Working Group Participant will include in any documents transferring ownership of patents subject to the assurance provisions sufficient to ensure that the commitments in the assurance are binding on the transferee, and that the transferee will similarly include appropriate provisions in the event of future transfers with the goal of binding each successor-in-interest.

Patent Policy Option 1: RAND-RF (Royalty-Free) Mode.

1. Licensing Commitment. For materials other than source code or datasets developed by the Working Group, each Working Group Participant agrees that it will offer to all applicants a royalty free, nonexclusive, worldwide, non-sub licensable, perpetual patent license to its Necessary Claims on fair, reasonable, and non-discriminatory terms to make, have made, use, import, offer to sell, sell, and distribute conformant implementations of any Approved Deliverable adopted by that Working Group only to the extent it implements the Approved Deliverable and so long as all required portions of the Approved Deliverable are implemented. Source code developed by the Working Group is subject to the license set forth in the Working Group charter.
2. Exclusion. Prior to the adoption of a Draft Deliverable as an Approved Deliverable, a Working Group Participant may exclude Necessary Claims from its licensing commitments under this agreement by providing written notice of that intent to the Working Group chair ("Exclusion Notice"). The Exclusion Notice for issued patents and published applications must include the patent number(s) or title and application number(s), as the case may be, for each of the issued patent(s) or pending patent application(s) that the Working Group Participant wishes to exclude from royalty-free licensing commitment set forth in Section 1 of this patent policy. If an issued patent or pending patent application that may contain Necessary Claims is not set forth in the Exclusion Notice, those Necessary Claims shall continue to be subject to the licensing commitments under this agreement. The Exclusion Notice for unpublished patent applications must provide either: (i) the text of the filed application; or (ii) identification of the specific part(s) of the Draft Deliverable whose implementation makes the excluded claim a Necessary Claim. If (ii) is chosen, the effect of the exclusion will be limited to the identified part(s) of the Draft Deliverable. The Chairperson will publish Exclusion Notices.
3. "Necessary Claims" means claims of a patent or patent application, other than design patents and design registrations, that are: (i) owned or Controlled by a Working Group Participant or its Affiliate now or at any future time; and (ii) are infringed by implementation of the normative portions, including the normative elements of optional portions, of applicable Approved Deliverable that is within Scope, where that infringement cannot be avoided by another technically reasonable non-infringing

alternative for implementing that Approved Deliverable. Necessary Claims do not include any claims: (a) that read solely on an implementation example included in that Approved Deliverable; (b) other than those claims set forth above, even if contained in the same patent as Necessary Claims; (c) that are infringed by any enabling technologies that may be necessary to make or use any product or portion thereof that complies with that Approved Deliverable, but are not themselves expressly set forth in that Approved Deliverable; (d) that are infringed by the implementation of other technologies developed elsewhere but referred to in the body of that Approved Deliverable; (e) that are infringed by any portions of any product and any combinations thereof the purpose or function of which is not required for conformance with the applicable Approved Deliverable; or (f) that are infringed by any software code set out in that Approved Deliverable for purposes of illustration, sample implementation, or reference.

Patent Policy Option 2: International Mode.

For materials other than source code or datasets developed by the Working Group, the Approved Deliverable is subject to then current terms of the Common Patent Policy for ITU-T/ITU-R/ISO/IEC, the Guidelines for Implementing the Common Patent Policy for ITU-T/ITU-R/ISO/IEC (including the Common Guidelines and Specific Provisions for ISO and IEC only), and Patent Statement and Licensing Declaration Form, which are available at <https://www.iso.org/iso-standards-and-patents.html>. References in these documents to ITU, ISO, and IEC are deemed replaced by references to the Project, references to Study Groups are deemed replaced by Working Groups, references to Recommendations and/or Deliverables are deemed replaced by references to Approved Deliverables, and all other ISO/IEC/ITU-T terms replaced with applicable Project terminology. Source code developed by the Working Group is subject to the license set forth in the Working Group charter.

In general, Working Groups prefer technologies with no known patent claims or technologies subject patent disclosures under Clause 1 (Free of Charge) of The Patent Statement and Licensing Declaration Form For ITU-T Or ITU-R Recommendation | ISO or IEC Deliverable.

Patent Policy Option 3: Open Web Foundation 1.0 Mode.

1. Open Web Foundation Final Specification Agreement 1.0 (“OWFa 1.0”). Upon the Working Group Participant’s execution of the Working Group Charter, that Working Group Participant will be subject to the obligations set forth in the Open Web Foundation Final Specification Agreement 1.0 (available at <http://www.openwebfoundation.org/legal/the-owf-1-0-agreements/owfa-1-0>, “OWFa 1.0”) with respect to the current and one immediately prior version of all Approved Deliverables from that Working Group.
2. Open Web Foundation CLA 1.0 (“OWF CLA 1.0”). Each Working Group Participant will be deemed to have executed the OWF CLA 1.0 for its Contributions (as defined in the OWF CLA 1.0) to the Working Group (available at <http://www.openwebfoundation.org/legal/the-owf-1-0-agreements/owf-contributor-license-agreement-1-0---copyright-and-patent>).
3. For Exclusion. Prior to the adoption of a Draft Deliverable as an Approved Deliverable, a Working Group Participant may exclude Granted Claims from its licensing commitments under the OWFa 1.0 by providing written notice of that intent to the Working Group chair (“Exclusion Notice”). The Exclusion Notice for issued patents and published applications must include the patent number(s) or title and application number(s), as the case may be, for each of the issued patent(s) or pending patent application(s) that the Working Group Participant wishes to exclude from the licensing commitment set forth in Section 4 of this patent policy. If an issued patent or pending patent application that may contain Granted Claims is not set forth in the Exclusion Notice, those Granted Claims will continue to be subject to the licensing commitments under the Agreement. The Exclusion Notice for unpublished patent applications must provide either: (i) the text of the filed application; or (ii) identification of the specific part(s) of the Draft Deliverable whose implementation makes the excluded claim an Essential Claim. If (ii) is chosen, the effect of the exclusion will be limited to the identified part(s) of the Draft Deliverable. The Project Chair will publish Exclusion Notices.
4. Approved Deliverables. Upon a Draft Deliverable being declared an Approved Deliverable by the Steering Committee, Working Group Participants will, without further action, be subject to the obligations set forth in the Open Web Foundation Final Specification Agreement (OWFa 1.0) with respect to that Approved Deliverable, except for any Granted Claims set forth in an Exclusion Notice. The OWFa 1.0 is available at <http://www.openwebfoundation.org/legal/the-owf-1-0-agreements/owfa-1-0>.

Patent Policy Option 4: W3C Mode.

1. Licensing Commitment. For materials other than source code or datasets developed by the Working Group, each Working Group Participant agrees to make available any of its Essential Claims, as defined in the W3C Patent Policy (available at <http://www.w3.org/Consortium/Patent-Policy-20040205>), under [the W3C RF licensing requirements](#) Section 5

(<http://www.w3.org/Consortium/Patent-Policy-20040205>), in Approved Deliverables adopted by that Working Group as if that Approved Deliverable was a W3C Recommendation. Source code developed by the Working Group is subject to the license set forth in the Working Group charter.

2. **For Exclusion.** Prior to the adoption of a Draft Deliverable as an Approved Deliverable, a Working Group Participant may exclude Essential Claims from its licensing commitments under this agreement by providing written notice of that intent to the Working Group chair (“Exclusion Notice”). The Exclusion Notice for issued patents and published applications must include the patent number(s) or title and application number(s), as the case may be, for each of the issued patent(s) or pending patent application(s) that the Working Group Participant wishes to exclude from the licensing commitment set forth in Section 1 of this patent policy. If an issued patent or pending patent application that may contain Essential Claims is not set forth in the Exclusion Notice, those Essential Claims shall continue to be subject to the licensing commitments under this agreement. The Exclusion Notice for unpublished patent applications must provide either: (i) the text of the filed application; or (ii) identification of the specific part(s) of the Draft Deliverable whose implementation makes the excluded claim an Essential Claim. If (ii) is chosen, the effect of the exclusion will be limited to the identified part(s) of the Draft Deliverable. The Working Group Chair will publish Exclusion Notices.

Patent Policy Option 5: RAND Mode.

1. **Licensing Commitment.** For materials other than source code or datasets developed by the Working Group, each Working Group Participant agrees that it will offer to all applicants a nonexclusive, worldwide, non-sublicensable, patent license to its Necessary Claims on fair, reasonable, and non-discriminatory terms to make, have made, use, import, offer to sell, sell, and distribute conformant implementations of any Approved Deliverable developed by this Working Group.
2. **Patent Disclosure Obligations.** When a Draft Deliverable is ready to be considered as an Approved Deliverable, the Working Group chair will initiate a “Patent Notification Period.” To initiate a Patent Notification Period, the Working Group chair will notify the Working Group Participants via email of the commencement of the Patent Notification Period. That notification will include a statement that identifies the Draft Deliverable subject to the Patent Notification Period, and that Patent Notification Period will be at least 30 days from its initiation. A Draft Deliverable may not become an Approved Deliverable until the completion of its Patent Notification Period. During a Patent Notification Period, if a Working Group Participant’s representative to the Working Group has actual personal knowledge that the Working Group Participant or its Affiliates’ patents or published patent applications contain Necessary Claims, then the Working Group Participant shall disclose, in writing (which may be delivered via e-mail) to the Working Group chair the existence of those patents or published patent applications. The Working Group chair will make those declarations available to Working Group Participants. Any disclosure made by a Working Group Participant pursuant to this Section does not impose any obligation on a Working Group Participant or its representatives to conduct any patent or other intellectual property searches of any kind or take any action other than as expressly stated above.
3. **“Necessary Claims”** means claims of a patent or patent application, other than design patents and design registrations, that are: (i) owned or controlled by a Working Group Participant or its Affiliate now or at any future time; and (ii) are infringed by implementation of normative portions, including the normative elements of optional portions, of the applicable Approved Deliverable that is within Scope, where that infringement cannot be avoided by another technically reasonable non-infringing alternative for implementing that Approved Deliverable. Necessary Claims do not include any claims: (a) that read solely on an implementation example included in that Approved Deliverable; (b) other than those claims set forth above, even if contained in the same patent as Necessary Claims; (c) that are infringed by any enabling technologies that may be necessary to make or use any product or portion thereof that complies with that Approved Deliverable, but are not themselves expressly set forth in that Approved Deliverable; (d) that are infringed by the implementation of other technologies developed elsewhere but referred to in the body of that Approved Deliverable; (e) that are infringed by any portions of any product and any combinations thereof the purpose or function of which is not required for conformance with the applicable Approved Deliverable; or (f) that are infringed by any software code set out in that Approved Deliverable.

Appendix C

Non-Member Agreement

The **Consortium for HPC/AI/ML Ethernet** (the “Project”) would like to receive input, contributions, suggestions and other feedback (“Contributions”) on the specifications, documents, source code, data, and other artifacts being developed within its working groups (the “Materials”). By signing below, you (on behalf of yourself if you are an individual and your company if you are providing Contributions on behalf of the company) grant the Project under all applicable intellectual property rights owned or Controlled by you or your company a non-exclusive, non-transferable, worldwide, perpetual, irrevocable, royalty-free license to use, disclose, copy, publish, license, modify, sublicense or otherwise distribute and exploit Contributions you provide for the purpose of developing and promoting the Materials and in connection with any product that implements and complies with the Materials. You warrant to the best of your knowledge that you have rights to provide this Contributions, and if you are providing Contributions on behalf of a company, you warrant that you have the rights to provide Contributions on behalf of your company. You also acknowledge that the Project is not required to incorporate your Contributions into any version of the Materials. You further agree that you and your company will not disclose it or distribute drafts of the non-public Project Materials to third parties. Unless the parties agree otherwise or the Project Materials are made publicly available by the Project, this obligation of non-disclosure will expire five (5) years from the date the material was disclosed to you.

Source Code

Any source code you provide to the Project is subject to the Developer Certificate of Origin version 1.1, available at <http://developercertificate.org/> and the license indicated in the Project’s source repository for the Materials.

Dataset

Any data you provide to the Project is subject to the license agreement indicated in the Project’s source repository for the Materials.

<u>Signature</u>	
<u>Print Name:</u>	
<u>Title:</u>	
<u>Company Name (if applicable):</u>	
<u>Email:</u>	
<u>Address:</u>	
<u>Date:</u>	

Project Sponsorship Agreement

Directed Fund Agreement between the Project Participants and the Linux Foundation

Funding for this Project is facilitated via a Linux Foundation Directed Fund, which is managed by Linux Foundation on behalf of the Project and subject to the direction of the Project's Steering Committee. To facilitate this arrangement, each Steering Member and General Member sponsoring the Project (each a "Fund Participant") enters into this Directed Fund Participation Agreement directly with the Linux Foundation under the following terms:

- Membership.** The sponsoring member ("Fund Participant") acknowledges that its financial support of the Project is as a member of the Linux Foundation. Linux Foundation membership is a prerequisite for participation in this Project Sponsorship Agreement.
- Sponsorship Terms.** The Fund Participant agrees to pay an annual sponsorship amount ("Participation Fee") to the Linux Foundation Directed Fund per the chosen Sponsorship Level. The Participation Fee is due within 30 days of the execution date of this agreement, and within 30 days of each anniversary of that date under the then current sponsorship amount.
- Termination.** This agreement will automatically terminate upon termination of your membership status in the Project. In addition, Linux Foundation may terminate this Agreement upon notice to you in the event that (a) the Project discontinues operations or otherwise ceases to function, (b) you are in material breach of any of the charters or policies of the Project or policies of the Linux Foundation (copies of which are maintained on the Linux Foundation web site), (c) the Steering Committee of the Project requests that we terminate this agreement, (d) you cease to be a member of the Project, or (e) applicable law or regulation would prohibit our ability to continue to receive the Participation Fee. No refunds will be given on payments made under this agreement for any reason.

The Linux Foundation will apply the Participation Fee as directed by the Steering Committee of the Project as consistent with the tax-exempt status and mission of The Linux Foundation and the Project. Linux Foundation will have custody of and final authority over the usage of the Participation Fee. A general and administrative fee ("G&A Fee") will be applied by the Linux Foundation to funds raised to cover finance, accounting, and operational support for the Project, and paid to Linux Foundation from all such Project Participation Fees and other gross receipts received with respect to the Project. The annual G&A Fee will be 9% of the all gross receipts received to support the Project (whether through the collection of Project Participation Fees, event revenues or otherwise) with respect to the first \$1,000,000 of annual gross receipts and 6% of annual gross receipts above \$1,000,000.

Sponsorship Level	Participation Fee
Steering Member	\$50,000 US
General Member	\$20,000 US
Contributor	\$5,000 US

By signing below, you acknowledge and agree that, when signed and accepted by us, this Agreement represents a binding contract between the parties and commits you and us to these terms and obligations:

Fund Name: Ultra Ethernet Project Fund

Sponsorship Level:

Authorized Representatives of Fund Participant:

Accepted:

FUND PARTICIPANT		THE LINUX FOUNDATION
(Print Sponsor Name)		
Signature		Signature
Name		Name
Title		Title
Date		Date