

Meeting Reminders:

1. Participation in this joint IEEE 802 Nendica / IEEE 802.3 NEA “E4AI” Assessment Electronic meeting does not require registration. This meeting does not count towards either IEEE 802.1 or IEEE 802.3 Working Group voting membership.
2. IMAT will be used for tracking meeting attendance
3. When Entering Zoom/Webex Session
 - Please make sure you have your full name and affiliation (in English Characters) noted in the Participants List when entering the meeting
 - To Change
 - Right click on name in participants list
 - Click on Rename
 - Pop up window shows – enter info there
 - Hit Change
 - Failure to do so will result in you being expelled from call in accordance with 802.3 Rules
4. Please stay muted until called upon.
5. Do not turn video on.
6. Please use the Chat window to request to be placed into the queue.

Joint
IEEE 802 Nendica / IEEE 802.3 NEA “E4AI”
“Compression Header” Workshop

Roger Marks
Chair, IEEE 802 Nendica

John D’Ambrosia
Chair, IEEE 802.3 NEA “E4AI”

23 April 2026

IEEE 802.3 NEA Ad hoc “802.3 Ethernet for AI” Assessment “Compression Header” Workshop Introduction

John D’Ambrosia
Chair, IEEE 802.3 NEA “Ethernet for AI” Assessment
Futurewei, U.S. Subsidiary of Huawei

23 March 2026

IEEE 802.3 NEA “Ethernet for AI” Assessment

- Under IEEE 802.3 Industry Connections New Ethernet Applications (NEA) Ad hoc
 - Chair, IEEE 802.3 NEA Ad hoc – Jon Lewis
 - Chair, “Ethernet for AI” (E4AI) Assessment Activity - John D’Ambrosia
- “E4AI” Home Page –
 - https://www.ieee802.org/3/ad_hoc/E4AI/index.html
- “E4AI” Reflector Information –
 - https://www.ieee802.org/3/ad_hoc/E4AI/reflector.html
 - Please join reflector if you have not done so yet
- Submitted “E4AI” Channel Data –
 - https://www.ieee802.org/3/ad_hoc/E4AI/public/channel/index.html

IEEE 802.3 NEA “E4AI” Related Activities

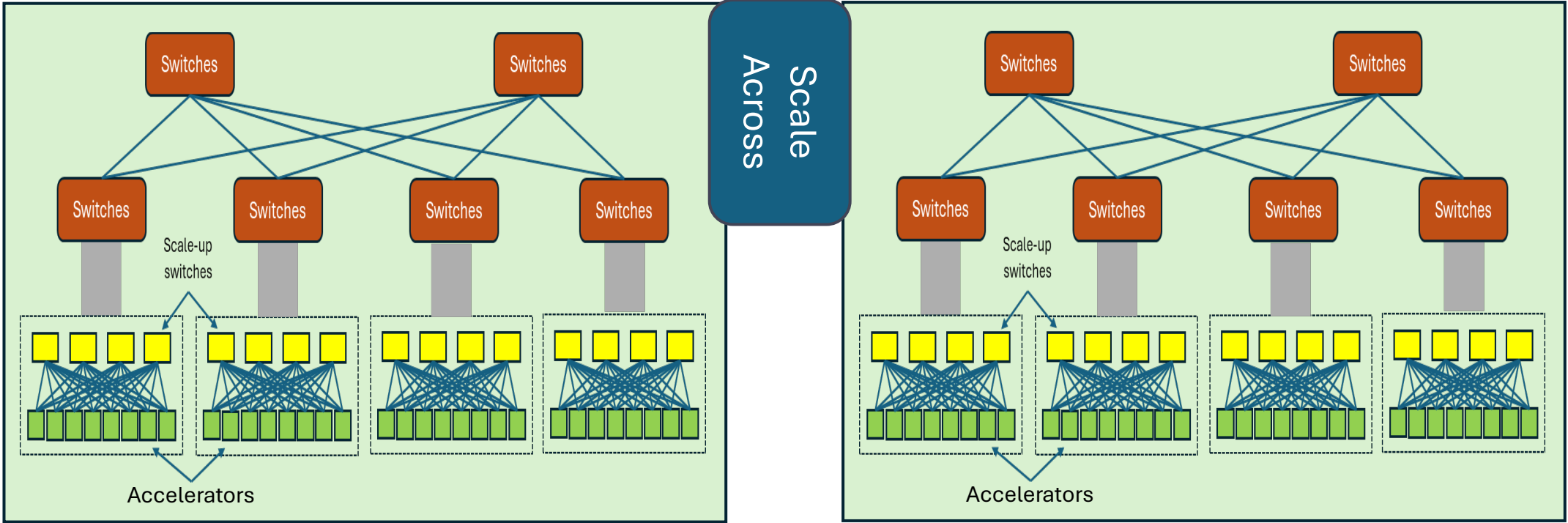
- Scope - An assessment of "Ethernet Interconnect for AI" with an emphasis on beyond 200 Gb/s signaling
- Consensus Building Related Activities -
 - IEEE P802.3dt Ethernet Metadata Services
 - the optional exchange of metadata through a physical layer service access point
 - IEEE 802.3 400 Gb/s Per Lane Study Group
 - 400 Gb/s per lane signaling for electrical interconnects as well as single-mode fiber optical interconnects with reaches up to 500 meters
 - Approved @ IEEE 802 March 2026 Plenary
 - Workshops
 - Fiber For AI (24 Feb 2026) – Multi-core, Hollow-core, Future SMF / MMF
 - Header Compression (23 Apr 2026)
 - Future Optical MDIs (TBA – Q3/Q4 2026)
- Future Activities
 - Next Speed (3.2 TbE? 6.4 TbE?)
 - Other Efforts TBD

The Big Picture

Back-end
Scale-Out

Back-end
Scale-Up

Front-end



Today's Ethernet

Appendix

IEEE 802.3 New Ethernet Applications Ad hoc

IEEE 802.3 NEA Ad Hoc Information

- Ad Hoc Officers
 - Jon Lewis, IEEE 802.3 NEA Ad Hoc Chair
 - John D'Ambrosia, IEEE 802.3 NEA Ad Hoc Vice-Chair
- Home Page - http://www.ieee802.org/3/ad_hoc/ngrates/index.html
- Reflector Information – http://www.ieee802.org/3/ad_hoc/ngrates/reflector.html
- Approved ICAID – https://ieee802.org/3/ad_hoc/ngrates/IC15-005-06%20New%20Ethernet%20Applications%20ICAID%20Clean%20Version%20Approved%20241004_Redacted.pdf

Key Aspects of IEEE 802.3 NEA Ad Hoc

- Goals
 - Assess emerging requirements
 - identify gaps not currently addressed by IEEE 802.3 standards
 - Facilitate building industry consensus
- Note
 - Any individual with an in-scope activity can leverage this ad hoc. Contact ad hoc chair.
 - Does not supersede any existing rules or processes

IEEE 802.3 NEA Ad Hoc Output

- Multiple types of deliverables –
 - Will provide records of the meetings, including minutes and supporting presentations.
 - May be the creation of one or more consensus presentations that are used as the basis for one or more Call-for-Interests to study new areas.
 - May be the creation, as appropriate, of white papers documenting the findings of the IC activity.
- Groups need to provide guidance on their proposed output