

# LWIG WWG

Created 2011

Charter: ~ [Informational](#) Documents about  
[implementing](#) constrained node networks

Heyday:

- 2014 RFC 7228 (terminology)
- 2016–2018: various RFCs on energy efficiency etc.
- 2021 RFC 9006 (Using TCP in IoT)

# LWIG status

- AUTH48: Minimal ESP (goes with RFC 7815 Minimal IKE)
- In IESG: draft-ietf-lwig-curve-representations
- ~2 active
  - RFC 7228 bis
  - draft-ietf-lwig-security-protocol-comparison
- ~5 expired: great docs at the time, but never completed

# RFC 7228 bis

## RFC 7228 Terminology:

- constrained node network
- "Class 1", "Class 2" devices

draft-ietf-lwig-7228bis  
expands

- set of classes offered
- range of some classes

M	Class 1, C1	~ 10 KiB	~ 100 KiB	STM32F103CB
M	Class 2, C2	~ 50 KiB	~ 250 KiB	STM32F103RC
M	Class 3, C3	~ 100 KiB	~ 500..1000 KiB	STM32F103RG
M	Class 4, C4	~ 300..1000 KiB	~ 1000..2000 KiB	"Luxury"
J	Class 10, C10	(16..)32..64..128 MiB	4..8..16 MiB	OpenWRT routers
J	Class 15, C15	0.5..1 GiB	(lots)	Raspberry PI
J	Class 16, C16	1..4 GiB	(lots)	Smartphones

Name	Type of energy limitation	Example Power Source
E0	Event energy-limited	Event-based harvesting
E1	Period energy-limited	Battery that is periodically recharged or replaced
E2	Lifetime energy-limited	Non-replaceable primary battery
E9	No direct quantitative limitations to available energy	Mains-powered

Table 6: Classes of Energy Limitation

# draft-ietf-lwig-security-protocol-comparison

Document experience with message sizes for various configurations of security protocols

→ can aid in selecting protocols for specific environment

DTLS 1.3 RPK + ECDHE	150	373	213	736
DTLS 1.3 Cached X.509/RPK + ECDHE	182	347	213	742
DTLS 1.3 PSK + ECDHE	184	190	57	431
DTLS 1.3 PSK	134	150	57	341

(Last draft expired, but now has renewed energy)

# Passing the Baton?

LWIG as a WG is running out of steam

Can IOTOPS take two foster children?

+ Most of the work on each is **done**; need completion

+ IOTOPS **chartered** for **informational** documents about IoT

– These two are maybe a bit wider than just ops

→ get AD concurrence

→ do the work, ship it