hp-wan:
goals of the BoF and definition

IETF 121, Dublin, 4 Nov 2024
Chairs: Tim Chown, Gorry Fairhurst

Definition

Taken from https://datatracker.ietf.org/doc/bofreq-huang-hp-wan/ :

“High-Performance Wide Area Networks (HP-WANs) are WANs that are engineered to meet the stringent demands of high-speed, low-latency, and ultra-high-volume applications in environments such as research, academia, and large-scale data processing.

These networks must efficiently handle high-throughput transmissions (particularly for large transactions), optimize available bandwidth, and ensure resilience, often where minimizing latency is critical.”

Goals

From the BoF request text:

“It will discuss key use cases and existing transport-related techniques currently used for localised high performance computing (HPC) scenarios but often with limitations;

Identify the gaps in existing WIT transport mechanisms for high-volume data congestion control, queue management and flow monitoring;

Provide an analysis of existing transport mechanisms and determine whether additional extensions or modifications to transport protocols are required to support HPC over shared WAN infrastructure.”

Note this BoF is focused on WIT (transport) area.

Topics to be Explored

We’d like to hear about current high volume data movement over WANs/Internet

- What works well, what does not.

Do we have enough information to form a valid assessment of hp-wan scenarios?

Are there gaps preventing better hp-wan performance?

- If so, are these transport issues?
- What does the IETF need to do to address any issues?
- Who has the expertise to work on these topics?