

(19) United States

(12) Patent Application Publication (10) Pub. No.: US 2024/0214290 A1

Jun. 27, 2024 (43) **Pub. Date:**

(54) SCALABLE NETWORK LATENCY MEASUREMENT DESIGN IN DISTRIBUTED STORAGE SYSTEMS

(71) Applicant: VMware, Inc., Palo Alto, CA (US)

Inventors: Sifan LIU, Shanghai (CN); Yu WU, Shanghai (CN); Jin FENG, Shanghai (CN); Jianan FENG, Shanghai (CN); Kai-Chia CHEN, Shanghai (CN)

Assignee: VMware, Inc., Palo Alto, CA (US)

Appl. No.: 18/165,499 (21)

Filed: Feb. 7, 2023 (22)

(30)Foreign Application Priority Data

Dec. 21, 2022 (WO) PCT/CN2022/140631

Publication Classification

(51) **Int. Cl.** H04L 43/0852 (2006.01)H04L 43/10 (2006.01) (52) U.S. Cl. CPC H04L 43/0852 (2013.01); H04L 43/10 (2013.01)

(57)ABSTRACT

The disclosure provides a method for measuring network latency between hosts in a cluster. The method generally includes receiving, by a first host, a first ping list indicating the first host is to engage in a first ping round with a second host; executing the first ping round with the second host, wherein executing the first ping round comprises: transmitting first ping requests to the second host; calculating a network latency for each of the first ping requests; and determining a first average network latency between the first host and the second host based on each of the network latencies calculated; determining the first average network latency is above a threshold; determining a cause of the first average network latency being above the threshold; and selectively triggering or not triggering an alarm based on whether the cause is determined to be a hardware or software layer impact, or neither.

