



(19) **United States**

(12) **Patent Application Publication**
Thiruveedula et al.

(10) **Pub. No.: US 2024/0214448 A1**

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

(54) **SYSTEMS AND METHODS FOR
AUTOMATED DEPLOYMENT OF
LOAD-BALANCED SERVICES IN A
CONTAINERIZED ENVIRONMENT**

(52) **U.S. Cl.**
CPC *H04L 67/1014* (2013.01); *H04L 67/101*
(2013.01); *H04L 67/56* (2022.05)

(71) Applicant: **Verizon Patent and Licensing Inc.**,
Basking Ridge, NJ (US)

(72) Inventors: **Bharath Thiruveedula**, Irving, TX
(US); **John M. Bittenbender**,
Bloomsburg, PA (US)

(73) Assignee: **Verizon Patent and Licensing Inc.**,
Basking Ridge, NJ (US)

(21) Appl. No.: **18/145,114**

(22) Filed: **Dec. 22, 2022**

Publication Classification

(51) **Int. Cl.**
H04L 67/1014 (2006.01)
H04L 67/101 (2006.01)
H04L 67/56 (2006.01)

(57) **ABSTRACT**

A system described herein may receive a request to configure a load-balanced service in a containerized environment. The system may include an indication of a particular network with which the load-balanced service should communicate. The system may generate a load balancer proxy node. Generating the load balancer proxy node may include associating the load balancer proxy node with a first interface associated with the particular network and with a second interface associated with the containerized environment. The system may generate a set of service node instances, which may include associating the set of service node instances with a third interface associated with the containerized environment. The system may associate the second interface with the third interface and may deploy, in response to the request, the set of load balancer proxy node instances and the set of service node instances to the containerized environment.

