

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

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**BEFORE THE PATENT TRIAL AND APPEAL BOARD**

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PALO ALTO NETWORKS, INC.,

Petitioner,

v.

QOMPLX LLC,

Patent Owner.

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Case No. IPR2026-00362

U.S. Patent No. 11,539,663

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**PETITIONER'S REPLY TO PATENT OWNER'S PRELIMINARY  
RESPONSE**

**I. “MIDSERVER”**

**A. “Midserver” Does Not Require Containerized Services**

The patent's “Definitions” section cannot be used to restore language deleted during prosecution. In response to a prior art rejection, applicants amended the claims to remove the same “containerized services” language that PO now seeks to add. EX1002, 411-412/497; 365-368/497. PO speculates it was deleted to avoid redundancy. POPR, 8 n.1. But, when amending the claims, applicants did not reference any definition of “midserver,” did not cite as support the purported definition, and did not mention “containerized services.” EX1002, 415/497; 37/497.

Instead, applicants indicated that the amendments “*more clearly* teach the functions of the midserver.” *Id.*, 415/497. They then stated unambiguously, “[t]he amendments now *clearly teach* the operation of the midserver” and argued that the claimed “midserver operations clearly distinguishes [the cited art].” *Id.* The purported lexicography is therefore not “clear and explicit.” *Thorner v. Sony Computer Ent'm't America, LLC*, 669 F.3d 1362, 1368 (Fed. Cir. 2012). PO cannot restore deleted language through claim construction. *Laryngeal Mask Co. v. Ambu*, 618 F.3d 1367, 1372-73 (Fed. Cir. 2010); *cf. Aylus Networks, Inc. v. Apple Inc.*, 856 F.3d 1353, 1359 (Fed. Cir. 2017) (prosecution disclaimer “protects the public's reliance on definitive statements made during prosecution”). Consistent with prosecution, claims 1 and 4 do not recite a bare “midserver,” but instead are directed

almost entirely to specifying the midserver's structure and operation. EX1001, 24:21-39, 24:47-63. And outside the Definitions section, the specification describes the midserver functionally (e.g., EX1001, 7:60-66) and containerized services permissively (EX1001, 10:27-29 ("may be designed" to run containerized services), 15:16-21 (embodiments "may contain" containers)).

**B. Maturana-Kashyap Satisfies Containerized Services**

The '663 patent provides several examples of "containerized services," including the well-known "Nginx proxy" and "RabbitMQ" services, which are software components that can run on a computer or network appliance. EX1001, 10:51-66. The Petition therefore explained how Maturana teaches such "containerized services": Maturana teaches a "cloud agent" (*i.e.* **midserver**) that comprises "various functional components" that perform "collection and upload of industrial data to a cloud-based storage and processing infrastructure," the same functions of the "containerized services" described in the patent. Pet. 40-42 (quoting EX1004, [0043], [0002]). Indeed, Figure 2 depicts the various containerized components, and the Petition provided an annotated version of such. Pet. 42.

Maturana also discloses that the cloud agent provides "services" (EX1004, [0051]) that collect data, process it, package it, and transmit it to the cloud. EX1004, [0042]-[0044], [0048], [0051]-[0056]. Kashyap teaches packaging and deploying such services as a virtual appliance "software image **containing** an application

designed to run inside a virtual machine.” EX1005, [0003]; Pet. (Paper 2), 5-6 (virtual appliances ““encapsulate the required applications or services””) (quoting EX1014, 279); EX1016, [0002]. Kashyap also teaches “OVF” (aka “OVA”) as a way to implement virtual appliances (EX1005, [0003]; Pet., 8-11) and this was known as “a *container* technology for distributing VMs” (EX1013, [0117]). Thus, the mapped combination includes cloud-agent services encapsulated in container technology, running on the midserver. Pet., 28-38; EX1003, ¶¶61-75; Pet., 40-49.

## **II. “SINGLE DATA STREAM”**

The claims recite “a single data stream,” not the continuous non-packetized transport protocol argued by PO. POPR 13-16; EX1001, 24:38-39, 24:62-63. The specification contradicts PO’s construction, describing “the sending and receiving of data packets over a computer network.” EX1001, 20:31-32 (emphasis added). Even PO’s extrinsic evidence at most describes a “data stream” as “a series of data elements ordered in time,” not a packet-free protocol. EX2025, 1; POPR, 15.

Maturana teaches the claimed single data stream. PO isolates Maturana’s description of a “single cloud upload packet” (POPR, 13-16), ignoring that Maturana describes ongoing collection of live data from multiple sources, including sensor data with “thousands of data points updated at a rate of less than a second” (EX1004, [0051-0052]; *id.*, [0002], [0034]; Pet., 22-26), supports “torrential data streams” (EX1004, [0035]), transmits serialized data to the cloud using HTTPS/SSL (*id.*,

[0049]), and uses live-data queues for “substantially real-time monitored data” (*id.*, [0060]) with priority for “time-critical” live data used by remote applications to “view substantially real-time data” (*id.*, [0060]-[0061]). Maturana’s packets are transmission units within the ongoing outbound stream. The Petition correctly identified Maturana’s aggregation of multiple sensor sources into a single cloud upload packet for delivery to the cloud, as retransmission of received data over the secure connection as a single data stream. Pet., 58-59; EX1003, ¶¶100-101.

### **III. “ESTABLISH A SECURE NETWORK CONNECTION”**

Claims 1 and 4 recite “establish a secure network connection” to an external network. EX1001, 24:32-33, 24:56-57. PO argues that Maturana fails to meet this generic security element because it lacks a specific authentication through a physical-device identifier. POPR, 17-21. But the claims do not recite authentication, device identifier, physical device, MAC address, or any specific protocol. EX1001, 24:32-33, 24:56-57. And PO’s construction is unsupported by the ’663 specification, which describes secure connectivity broadly, including “standard VPN or similar encryption-based network transport technologies,” certificates, and TLS, confirming that “secure network connection” encompasses secure connections without further limitation. EX1001, 9:48-52, 16:11-60. As the Petition explains, Maturana teaches using several techniques to “secure outbound traffic to the cloud,” including

“HTTPS/SSL, certificate authority enabled transmission, *and/or* unique identity using MAC addresses.” EX1004, [0057] (emphasis added); Pet. 49-50, 62.

There is also a motivation to combine. PO cannot plausibly argue that virtualization defeats Maturana when Maturana contemplates virtualization. Maturana discloses its components running on “virtual machine(s)” (EX1004, [0042]), and its registry embodiment validates the cloud agent and issues a certificate to create the secure communication channel (*id.*, [0089]-[0094]). Pet., 28-38 (citing these disclosures); EX1003, ¶¶62-75 (same). PO’s exhibits confirm VMs can use assigned dynamic or static MAC addresses. EX2032, 2-3; EX2033, 1 (VM MAC address “does not change” absent conflict). In the combination, Kashyap’s teachings standardize authorized installation and configuration of Maturana’s cloud agent; the combination does not enable unauthorized relocation. Pet., 28-38, 49-50; EX1003, ¶¶62-75, 89-91. Kashyap’s automatic configuration mechanism ensures that Maturana’s “customer-specific configuration and subscription information” (EX1004, [0044]; *id.*, [0052]-[0053], [0069]-[0070]) and registry-stored configurations for secure connectivity (*id.*, [0074]-[0075]) are automatically provided to the cloud agent upon “installation at any facility” (*id.*, [0041]), thereby enabling the automatic (and secure) connection of the cloud agent to the cloud platform. Pet., 33-35; EX1003, ¶¶67-69. Thus, the combination preserves—not undermines—Maturana’s security model.

**Petitioner's Preliminary Reply**  
**U.S. Patent No. 11,539,663**

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Respectfully submitted,

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**CERTIFICATE OF SERVICE**

The undersigned hereby certifies that on September 9, 2026, true and correct copies of the foregoing document and supporting materials were served in its entirety at the following email addresses:

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