

**IN THE UNITED STATES DISTRICT COURT  
FOR THE EASTERN DISTRICT OF TEXAS  
TYLER DIVISION**

**QoS IP, LLC,**

**Plaintiff**

v.

**MELLANOX TECHNOLOGIES,  
LTD. and MELLANOX  
TECHNOLOGIES, INC.**

**Defendants.**

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**CIVIL ACTION NO. 6:17-cv-00212**

**PLAINTIFF’S FIRST AMENDED COMPLAINT AND JURY DEMAND**

Plaintiff QoS IP, LLC (“QoS”) alleges as its First Amended Complaint for patent infringement against Mellanox Technologies, Ltd. and Mellanox Technologies, Inc. (collectively, “Mellanox”) as follows:

**THE PARTIES**

1. Plaintiff QoS is a Texas limited liability company with its headquarters and principal place of business at 1400 Preston Road, Suite 475, Plano, Texas 75093.
2. Defendant Mellanox Technologies, Ltd. is an Israeli corporation headquartered at Hakidma 26, Ofer Industrial Park, Yokneam, Israel, 2069200 (tel: 972-74-723-7200).
3. Mellanox Technologies, Inc. is a California corporation headquartered at 350 Oakmead Parkway, Suite 350, Sunnyvale, California 94085, with a principal place of business located at 10801 N. MoPac Expressway #300, Austin, Texas 78759 (tel: 866-355-2669).

4. Mellanox has appeared through its counsel of record, Melody Drummond Hansen, O'Melveny & Myers, LLP, 2765 Sand Hill Road, Menlo Park, CA 94025.

5. According to Mellanox, its core business is supplying end-to-end connectivity solutions for servers and storage that optimize data center performance:

Mellanox intelligent interconnect solutions increase data center efficiency by providing the highest throughput and lowest latency, delivering data faster to applications and unlocking system performance. Mellanox offers a choice of high performance solutions: network and multicore processors, network adapters, switches, cables, software and silicon . . . More information is available at [www.mellanox.com](http://www.mellanox.com).

6. Mellanox markets products that comply with and support the 802.1Qaz technical standard including 802.1Qaz Enhanced Transmission Selection and DCBx, a Data Center Bridging Exchange protocol for identifying DCB-capable devices in a network.

### **JURISDICTION AND VENUE**

7. QoS brings this action for patent infringement under the United States Patent Act, namely 35 U.S.C. §§ 271, 281, and 284-285, among other laws. This Court has subject-matter jurisdiction pursuant to 28 U.S.C. §§ 1331 and 1338(a).

8. Venue is proper in this judicial district pursuant to 28 U.S.C. § 1400(b). Mellanox does business in this judicial district, has committed acts of infringement in this judicial district, has purposely transacted business in this judicial district involving the accused products, and/or, has a regular and established place of business in this judicial district.

9. Mellanox is subject to this Court's specific and general personal jurisdiction pursuant to due process and/or the Texas Long-Arm Statute, due at least to its substantial

business and principal office in this State and judicial district, including at least part of its infringing activities and regularly doing or soliciting business, engaging in other persistent conduct, and/or deriving substantial revenue from goods sold and services provided to Texas residents.

### **THE PATENT IN SUIT**

10. U.S. Patent No. 7,385,982 (the “’982 Patent”) is titled “SYSTEMS AND METHODS FOR PROVIDING QUALITY OF SERVICE (QOS) IN AN ENVIRONMENT THAT DOES NOT SUPPORT QOS FEATURES.”

11. A true and correct copy of the ’982 Patent is attached as Exhibit A.

12. The inventors are Gary G. Warden, James A. Cunningham, and Nathan A. Kragick.

13. The inventors recognized the value of providing a “guarantee as to the bandwidth or latency of communications over the corresponding channels.” ’982 Patent at 1:66-2:1. They also recognized, however, that providing such Quality of Service (“QoS”) required certain information that was unavailable or limited in then-existing networking technologies.

14. At the time, the inventors focused on fibre channel and sought to enable Class 4 QoS in Class 2 or Class 3 fibre channel networks.

15. During or about June 2000, Mr. Warden was told by an industry colleague that enabling QoS functionality found in Class 4 fibre channel network switches was not technically possible in existing networks lacking the Class 4 QoS infrastructure.

16. In response to this and other interactions with industry colleagues expressing

a common belief that a solution was technically impossible, Mr. Warden and his co-inventors conceived and developed a novel system that utilizes existing infrastructure in unconventional ways.

17. The inventors' solution overcame the technical problem leaving intact the existing equipment on existing communications channels yet enabling QoS using non-QoS header information.

18. On information and belief, by December 2001, the named inventors completed a working prototype of such an inventive switch, and on April 9, 2002, they filed provisional Application No. 60/371,198.

19. On information and belief, the named inventors in 2002 regarded their fundamental invention as a valuable and worthy of protection.

20. The claimed subject matter of the '982 Patent enables control of QoS parameters of network traffic on a more granular level. QoS requirements may be specified for certain types of traffic, over QoS circuits, or between certain endpoints using the '982 claimed subject matter.

21. By using non-QoS information such as source/destination address or traffic type to determine QoS and queueing of frames, the inventors improved then-existing systems that lacked such capabilities and enabled end-to-end QoS ensuring minimum bandwidth and maximum latency parameters for select traffic frames.

22. On information and belief, the named inventors, but for the opportunity to receive a patent, would not have disclosed to the public their novel, useful, and non-obvious improvement to existing switches operable in existing computer networks. In that regard,

the named inventors relied upon the subject-matter eligibility of existing computer networks, such as the subject matter of U.S Patent No. 6,104,700 that had issued in 2000 and which the named inventors cited in their July 24, 2003, Invention Disclosure Statement (IDS) as related art during the patent prosecution process.

23. In exchange for forever forfeiting the secrecy of their unconventional methods and systems for otherwise conventional switches, the named inventors' assignee, Next Generation Systems, Inc., was issued United States Patent No. 7,385,982 on June 10, 2008.

24. The Patent Office's grant confers exclusive rights in improved methods for operating existing computer networks (Claims 1-12), exclusive rights in improved switches operable in existing computer networks (Claims 13-22), and exclusive rights in computer networks that comprise the improved switches (Claims 23-27).

25. The '982 Patent was issued after a full examination and upon a finding that its claimed subject matter is patent-eligible.

26. Consistent with its right to exploit its duly issued patent, Next Generation Systems, Inc., assigned all substantial rights—including sublicensing rights, the right to exclude others, and to enforce, sue, and recover damages for past and future infringements—to QoS on or about March 5, 2015.

### **MELLANOX SWITCHES**

27. On information and belief, Mellanox makes, markets, imports, offers to sell, and sells at least the following products: SX1000 Series, SN2000 Series, and SN3000 Series switches. Infringing products include, without limitation, the SX and SN2000 series

switches. Examples of infringing models include: SX1012, SX1012X, SX1016, SX1018HP, SX 1024, SX 1024(52), SX1035, SX1036, SX1410, SX1710, SN2100, SN2410, and SN2700. On information and belief, such products have an operating system called MLNS-OS that Mellanox licenses to end users.

28. On information and belief, MLNX-OS provided to Mellanox end-users to run on switches that operated on computer networks.

29. Mellanox is aware and intends that its end-users operate MLNX-OS on computer networks.

30. On information and belief, Mellanox intends for MLNX-OS to facilitate its switches' support of Enhanced Transmission Selection (ETS) and Data Center Bridging (DCB) functionality, which individually and collectively ensure low latency and zero packet loss.

31. Mellanox publishes content describing QoS functionality of its switches. On information and belief, Mellanox is aware that when its switches receive untagged frames with no QoS information in their header, the switches apply a default switch priority, which is SP (0).

32. On information and belief, Mellanox is aware that combination of source/destination address, source/destination socket numbers, or a session identifier may be used to define and distinguish and apply QoS policies.

33. Further, on information and belief, Mellanox is aware that the Enhanced Transmission Selection (ETS) feature in the accused Mellanox switches provides bandwidth allocation on converged links in end stations and bridges in a Data Center

Bridging environment.

34. On information and belief, Mellanox is aware that ETS is employed on its switches to allocate bandwidth to traffic classes. On information and belief, Mellanox is aware that the accused switches implement DCB and ETS to ensure low latency and zero packet loss.

35. Mellanox is aware and intends that its products comply with the 802.1Qaz IEEE standard.

36. 802.1Qaz is a technical standard that relates to the above-mentioned Enhanced Transmission Selection (ETS) functionality. On information and belief, Mellanox is aware that the IEEE standard 802.1Qaz also specifies the Data Center Bridging (DCB) functionality.

37. Mellanox is aware and intends that its switches exchange DCB information using a protocol called DCBX, which is an extension of the Link Layer Data Protocol (LLDP).

38. Mellanox is aware and intends that such information includes “TLV” (time/length/value) information relating to the ETS functionality.

39. Information known to QoS shows that Mellanox is aware and intends that DCBX defines two different types of attribute-passing mechanisms and that those two types of mechanisms are (1) symmetric, wherein the passing of an attribute from one port to its peer port utilizes the same attribute value, and (2) asymmetric, wherein the desired configuration of the peer’s port may not match the configuration of the local port.

40. In some deployments with multiple switches, processors are configured to

maintain information identifying QoS that is supported by at least one other “willing” switch in the fabric. Mellanox Uniform Fabric Management Software can be used to maintain such information.

41. Mellanox is aware and intends that DCB profiles are used by its switches to apply QoS requirements to different traffic classes to ensure that all devices in the relevant network domain or subnet are coordinated to meet end-to-end QoS requirements.

42. When ETS is enabled on Mellanox switches, a user may configure the weighted round robin (WRR) bandwidth rate and the distribution function.

43. ETS can be enabled on Mellanox switches to allocate bandwidth at 25% for each traffic class.

44. On information and belief, Mellanox is aware that end-to-end QoS configuration using ETS can be achieved in its switches by either or both of the commands: `set_egress_map` and `tc-wrap`.

45. Mellanox is aware that commands may be issued to Mellanox switches by users that set policies, configure access control lists, and configure traffic classes.

46. Mellanox is aware and intends that its switches support four traffic classes that can be configured to correspond to VLANs.

47. Mellanox is aware and intends that such traffic classes are configured to correspond to address information (MAC addresses, IP addresses) found in access control lists (ACLs).

48. Address information is non-QoS information.

49. Mellanox switches place packets into queues for transmission.

50. Mellanox intends for these queues to be used in connection with the QoS functionality that its switches provide.

51. In normal operation of the Mellanox switches, frames are placed into queues according to their traffic classification, and queuing parameters depend on how Mellanox switches apply QoS Policy Rules.

52. Mellanox switch queues are allocated from a pool of available buffer (memory) space.

53. In normal operation of the Mellanox switches, frames are stored in different buffers (memory) corresponding to different queues based upon classification of the frames.

54. Such buffers are dynamically allocated from physical memory.

55. Mellanox FCoE (Fibre Channel over Ethernet) technology can encapsulate Fibre Channel Class 2 and Fibre Channel Class 3 frames.

56. Mellanox switches perform VLAN mapping to correlate traffic class to/with VLAN ID.

57. In the Mellanox switches, implementation of DCB provides enhanced QoS congestion and bandwidth allocation to support multiple traffic types on the same Ethernet link. DCB profiles define ETS groupings of priority into traffic classes to which specific bandwidth allocation and scheduling are applied.

58. Mellanox switches implementing the OpenFlow protocol support commands used to provide end-to-end QoS guarantees. Such OpenFlow commands include the QoS command, which applies the set\_queue QoS action to packets.

59. In OpenFlow protocol, packets are placed in traffic class queues on egress.

The Tclass of a packet determines its path in the queuing structure. Mellanox's implementation of the OpenFlow protocol enables field matching on the basis of destination MAC address, VLAN ID, source IP address, destination IP address, source UDP/TCP port, and destination UDP/TCP port.

60. Destination MAC address, VLAN ID, source IP address, destination IP address, and source/destination UDP/TCP port information are non-QoS information.

61. Mellanox switches have multiple input and output ports for data ingress and egress.

62. Mellanox designs its switches to be stackable for construction of high-density platforms intended for deployment in multi-switch systems.

63. Mellanox publishes product documentation and manuals to promote, instruct, direct, and encourage others to deploy and configure its switches, including within systems having pluralities of such switches deployed therein, in the manner described herein.

**COUNT I  
(INFRINGEMENT OF U.S. PATENT NO. 7,385,982)**

64. QoS incorporates paragraphs 1 through 65 herein by reference.

65. As the owner of the '982 Patent, QoS holds all substantial rights in and under the '982 Patent, including the right to grant sublicenses, exclude others, and to enforce, sue, and recover damages for past and future infringement.

66. The '982 Patent is valid, enforceable and was duly issued in full compliance with Title 35 of the United States Code.

67. Mellanox has no consent or authorization to practice the '982 Patent.

68. The '982 Accused Products perform the step of receiving one or more frames, wherein each frame contains non-Quality-of-Service (non-QoS) header information at least because, in normal operation, the 982 Accused Products receive frames that each contain MAC address information, VLAN ID information, and/or IP address information.

69. The '982 Accused Products perform the step of classifying the one or more frames to associate one or more of the frames with a Quality-of-Service (QoS) circuit based on the corresponding non-QoS header information wherein each frame has an associated QoS requirement that corresponds to one of the QoS circuits.

70. The '982 Accused Products support traffic flow classification functionality that identifies a subset of frames that may be associated with a QoS circuit and warrant the same treatment to achieve the corresponding QoS requirements.

71. The '982 Accused Products implement QoS through user-defined policies, port-based QoS configuration, and integration with virtual output queuing to manage egress congestion.

72. The '982 Accused Products support end-to-end QoS configuration using Enhanced Transmission Selection (ETS) through the `set_egress_map` and/or `tc-wrap` commands.

73. The '982 Accused Products support four traffic classes that can be configured to correspond to VLANs and that can also be configured to correspond to address information in Access Control Lists.

74. The '982 Accused Products support field matching—such as MAC address, VLAN ID, source/destination IP address and source/destination UDP/TCP port fields—

and perform the Set\_Queue OpenFlow Action.

75. The '982 Accused Products perform the step of scheduling delivery of the one or more frames based upon the corresponding frame classifications, wherein non-QoS frames in classifications corresponding to Quality-of-Service (QoS) circuits are scheduled in a manner that meets the QoS requirements associated with the QoS circuits corresponding to the frames.

76. In the Accused Products, frames are set in the appropriate queue based on traffic classification to meet QoS requirements associated with that traffic classification's QoS circuit.

77. In the Accused Products, Enhanced Transmission Selection (ETS) is employed to allocate bandwidth to traffic classes and packets are queued in accordance with traffic classification.

78. In the Accused Products, Data Center Bridging (DCB) profiles are used to apply QoS requirements to different traffic classes to ensure all devices in the relevant network domain or subnet are coordinated to meet QoS requirements on the network and on an end-to-end basis.

79. In the Accused Products, the egress queue in the OpenStack solution is set based upon classification, which can depend upon the source MAC address (non-QoS header information), and packets are classified into flows (in switches supporting OpenFlow) based upon non-QoS header information that is matched in the flow table.

80. With respect to handling of non-QoS frames of the '982 Accused Products, when the 982 Accused Products receive untagged frames with no QoS header information,

they are assigned the default switch priority of SP (0).

81. The '982 Accused Products encapsulate fibre channel Class 2 and/or Class 3 frames using Mellanox FCoE technology and such Class 2 and Class 3 frames are conveyed over Ethernet and switched according to their traffic class.

82. The '982 Accused Products perform the step of storing each of the one or more frames in a queue, wherein the queue is selected based upon the classification of the frame at least because the '982 Accused Products encapsulate fibre channel Class 2 and/or Class 3 frames using Mellanox FCoE technology and such Class 2 and Class 3 frames are conveyed over Ethernet and switched according to their traffic class.

83. The '982 Accused Products perform the step of defining header information criteria corresponding to one or more QoS circuits, wherein classifying the one or more frames comprises identifying ones of the frames for which the corresponding header information meets the defined criteria at least because the '982 Accused Products queue frames at ingress and/or egress, buffer frames under conditions of congestion, and queuing parameters depend upon the application of QoS policy rules.

84. In the Accused products, storage of frames in buffers is based upon the classification, the ingress traffic manager queues data based upon predefined scheduling/bandwidth parameters, and/or packets are placed in traffic class queues on egress wherein the Tclass of the packet determines the packet path in the queuing structure.

85. The '982 Accused Products perform the step of allocating a queue for each of the defined QoS circuits from a pool of buffer space and storing frames classified as corresponding to each QoS circuit in the corresponding queue.

86. Queues are identified by traffic class and port in the normal operation of the '982 Accused Products.

87. With respect to buffer space of the '982 Accused Products, buffer space is dynamically allocated to each queue as needed to store the corresponding frames at least because the packet buffer pool is allocated to a particular port/queue on demand.

88. The '982 Accused Products perform the step of deallocating at least one of the QoS circuits by successively notifying each switch in the path of the at least one QoS circuit that the at least one QoS circuit is deallocated, beginning with a switch nearest a source node and ending with a switch nearest a destination node.

89. The Data Center Bridging (DCB) exchange protocol auto-negotiates parameters of QoS circuits in the Mellanox switches.

90. In normal operation, deallocation is performed successively throughout the fabric along a path beginning with a source node and ending nearest a destination by operation of Mellanox Switch auto-negotiation as link comes up.

91. In the Accused Products, LLDP is implemented with DCBX, and if allocated bandwidth is required for the QoS circuit from which bandwidth was allocated, the bandwidth is restored to the original circuit.

92. The '982 Accused Products perform the step of notifying additional switches that support QoS in a corresponding switching fabric that the at least one QoS circuit is deallocated at least because they communicate QoS information across a switching fabric, as explained above, and because commands such as dcb ets tc bandwidth are used to change or reduce the amount of traffic for a particular traffic class.

93. The '982 Accused Products perform the claimed methods in a switching fabric. DCBX ensures that QoS requirements are communicated across a fabric, and in systems with more than one Mellanox switch, the processor is configured to maintain information identifying QoS supported by one or more additional "willing" switches in the fabric.

94. In some deployments Mellanox Uniform Fabric Management Software is used to perform this step in compliance with the 802.1Qaz standard; the DCB Feature State machine ensures such operation and Mellanox switches exchange ETS TLV in compliance with the 802.1Qaz standard.

95. The '982 Accused Products perform the step of identifying a level of QoS supported by each switch in the switching fabric. DCBX ensures that QoS requirements are communicated across a fabric of Mellanox switches, and in systems with more than one '982 Accused Product, the processor is configured to maintain information identifying QoS supported by one or more additional "willing" switches in the fabric.

96. Information identifying the level of QoS supported by each Mellanox switch in the switching fabric is communicated to each of the switches that support QoS using the DCBX protocol, in compliance with the 801.1Qaz standard, to communicate information across the fabric.

97. The '982 Accused Products comprise one or more input ports. The Accused Mellanox Products are capable of accommodating at least one RJ-45 (Ethernet) cable.

98. The '982 Accused Products are sold and marketed with a varying number of ports configured for input/output.

99. The '982 Accused Products comprise one or more queues.

100. In the Accused Products, a processor is coupled to the input ports, the output ports and the queues.

101. Mellanox describes in product documentation for the Accused Switches each model's power, protection, and ventilation management to ensure optimum processor performance and utilization of the x86 processor's architecture.

102. A processor is coupled to the input and output ports in order to receive frames, place frames in a queue, and schedule transmission.

103. The processor is configured to examine non-Quality-of-Service (non-QoS) headers of frames received at the input ports (e.g., VLAN or address information analyzed by the Accused Products), classify the frames to associate one or more of the frames with a Quality-of-Service (QoS) circuit based on corresponding non-QoS header information wherein each of the frames has an associated QoS requirement that corresponds to one of the QoS circuits, and schedule transmission of non-QoS frames based on the respective classifications of the non-QoS frames from the output ports in a manner that meets the QoS requirements associated with the QoS circuits corresponding to the frames.

104. In compliance with the 801.1Qaz standard, and as explained herein in connection with the steps performed by the 982 Accused Products, frames received are classified in a manner that requires examination of the non-QoS information found in the frame header. Frames received at input ports are examined by the ingress packet processor, which examines non-QoS header information (e.g., source MAC address, destination MAC address).

105. The ingress packet processor classifies frames to associate with one or more QoS circuit(s) based upon policy action dependent on non-QoS header information. The '982 Accused Products apply scheduling profiles based upon classifications of non-QoS frames to meet QoS requirements, and policy rules applied may be based upon access control lists, may be port-based, may be determined by application (e.g., IP, UDP/TCP), or may be matched to a flow key for classification.

106. The '982 Accused Products comprise a decision buffer, wherein the processor is configured to store each frame in the decision buffer for examination and classification before each frame is forwarded to an egress queue.

107. The '982 Accused Products have flexible packet buffer memory for storing frames during examination.

108. The processor is configured to examine the header information of the frame and classify the frame while the frame is stored in the decision buffer.

109. The processor is further configured to forward the frame from the decision buffer to a queue corresponding to the classification of the frame.

110. Mellanox SwitchX products integrate Ethernet and fibre channel in a single fabric. Integration with Fibre Channel Class 2 or 3 ENodes and edge FCoE switches uses DCBX to ensure QoS capabilities across the fabric.

111. Multi-switch deployments provide homogeneous or heterogeneous levels of QoS capabilities by supporting symmetric parameter passing. The switches use DCBX to establish QoS circuits and comply with the 802.1Qaz-2011 standard for transmission selection for bandwidth sharing between traffic classes.

112. For at least the reasons identified above, Mellanox directly infringes one or more claims of the '982 Patent, including at least claims 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 13, 14, 15, 16, 17, 18, 20, 23, 24, and 25, by making, using, offering for sale, selling and/or importing products that include the claimed systems comprising improved switches and perform the claimed methods of improving the operation of existing networks.

113. For at least the reasons identified above, Mellanox induces others to infringe one or more claims of the '982 Patent, including at least claims 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 13, 14, 15, 16, 17, 18, 20, 23, 24, and 25, by providing—with full awareness that the '982 Accused Products (individually or when a plurality are deployed in systems as directed by Mellanox) literally meet or are capable of literally meeting each limitation of at least one of claims 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 13, 14, 15, 16, 17, 18, 20, 23, 24, or 25 of the '982 Patent, since at least April 11, 2017, or service of the original complaint—the '982 Accused Products to others in the United States with the specific intent that the '982 Accused Products be used to perform the claimed methods and to comprise the claimed systems as directed by documentation and customer support provided by Mellanox.

114. For at least the reasons identified above, Mellanox contributes to others' infringement of one or more claims of the '982 Patent, including at least claims at least claims 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 13, 14, 15, 16, 17, 18, 20, 23, 24, and 25, by providing—with full awareness that the '982 Accused Products (individually or when a plurality are deployed in systems as directed by Mellanox) literally meet or are capable of literally meeting each limitation of at least one of claims 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 13, 14, 15, 16, 17, 18, 20, 23, 24, or 25 of the '982 Patent, since at least April 11, 2017, or

service of the original complaint—the '982 Accused Products to others in the United States with the specific intent that the '982 Accused Products be used to perform the claimed methods and to comprise the claimed systems as directed by documentation and customer support provided by Mellanox and with full awareness that the '982 Accused Products are not capable of any substantial uses that do not infringe at least one claim of the '982 Patent.

115. As a result of Mellanox's infringing conduct, QoS has been harmed. Mellanox is thus liable to QoS in an amount that adequately compensates for Mellanox's infringement, which compensation cannot be less than a reasonable royalty together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

#### **REQUIREMENT OF LITIGATION HOLD**

116. By at least April 11, 2017, or service of the original complaint, Mellanox was notified, and is hereby reminded, of its ongoing legal obligation to locate, preserve, and maintain all records, notes, drawings, documents, data, communications, materials, electronic recordings, audio/video/photographic recordings, and digital files, including edited and unedited or "raw" source material, and other information and tangible things that Mellanox knows, or reasonably should know, may be relevant to actual or potential claims, counterclaims, defenses, and/or damages by any party or potential party in this lawsuit, whether created or residing in hard copy form or in the form of electronically stored information (hereafter collectively referred to as "Potential Evidence").

117. As used above, the phrase "electronically stored information" includes without limitation: computer files (and file fragments), e-mail (both sent and received, whether internally or externally), information concerning e-mail (including but not limited

to logs of e-mail history and usage, header information, and deleted but recoverable emails), text files (including drafts, revisions, and active or deleted word processing documents), instant messages, audio recordings and files, video footage and files, audio files, photographic footage and files, spreadsheets, databases, calendars, telephone logs, contact manager information, internet usage files, and all other information created, received, or maintained on any and all electronic and/or digital forms, sources and media, including, without limitation, any and all hard disks, removable media, peripheral computer or electronic storage devices, laptop computers, mobile phones, personal data assistant devices, Blackberry devices, iPhones, video cameras and still cameras, and any and all other locations where electronic data is stored. These sources may also include any personal electronic, digital, and storage devices of any and all of Mellanox's agents, resellers, or employees if electronically stored information resides there.

118. Mellanox is hereby further notified and forewarned that any alteration, destruction, negligent loss, or unavailability, by act or omission, of any Potential Evidence may result in damages or a legal presumption by the Court and/or jury that the Potential Evidence is not favorable to Mellanox's claims and/or defenses. To avoid such a result, Mellanox's preservation duties include, but are not limited to, the requirement that Mellanox immediately notify its agents and employees to halt and/or supervise the auto-delete functions of Mellanox's electronic systems and refrain from deleting Potential Evidence, either manually or through a policy of periodic deletion.

### **JURY DEMAND**

119. QoS hereby demands a trial by jury on all claims, issues, and damages so

triable.

**PRAYER FOR RELIEF**

QoS prays for the following relief:

- a. That Mellanox be summoned to appear and answer;
- b. That the Court enter an order declaring that Mellanox has infringed the '982 Patent;
- c. That this is an exceptional case under 35 U.S.C. § 285;
- d. That the Court grant QoS judgment against Mellanox for all actual, consequential, special, punitive, exemplary, increased, and/or statutory damages, including treble damages pursuant to 35 U.S.C. 284 including, if necessary, an accounting of all damages; pre and post-judgment interest as allowed by law; and reasonable attorney's fees, costs, and expenses incurred in this action; and
- e. That QoS be granted such other and further relief as the Court may deem just and proper under the circumstances.

Dated: August 15, 2017

Respectfully submitted,

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**CERTIFICATE OF SERVICE**

The undersigned hereby certifies that a true and correct copy of the above and foregoing document has been served on August 15, 2017, to all counsel of record who are deemed to have consented to electronic service via the Court's CM/ECF system per Local Rule CV-5.



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Cabrach J. Connor