

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

PARITY NETWORKS LLC,

*Plaintiff,*

v.

PALO ALTO NETWORKS, INC.,

*Defendant.*

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CIVIL ACTION NO. 6:19-cv-00152

**JURY TRIAL DEMANDED**

**ORIGINAL COMPLAINT**

Plaintiff Parity Networks LLC (“Plaintiff” or “Parity Networks”), by and through its attorneys, for its Original Complaint against Palo Alto Networks, Inc. (“Defendant” or “PAN”), and demanding trial by jury, hereby alleges as follows:

**I. NATURE OF THE ACTION**

1. This is an action for patent infringement arising under the patent laws of the United States, 35 U.S.C. §§ 271, *et seq.*, to enjoin and obtain damages resulting from Defendant’s unauthorized use, sale, and offer to sell in the United States of products, methods, processes, services and/or systems that infringe Parity Networks’ United States patents, as described herein.

2. PAN manufactures, provides, uses, sells, offers for sale, imports, and/or distributes infringing products and services; and encourages others to use its products and services in an infringing manner, including their customers, as set forth herein.

3. Parity Networks seeks past and future damages and prejudgment and post judgment interest for PAN’s past infringement of the Patents-in-Suit, as defined below.

## **II. PARTIES**

4. Plaintiff Parity Networks is a limited liability company organized and existing under the laws of the State of Texas. Parity Networks' registered agent for service of process in Texas is InCorp Services, Inc., 815 Brazos Street, Suite 500, Austin, Texas 78701.

5. On information and belief, Defendant Palo Alto Networks, Inc. is a corporation organized under the laws of Delaware, having a regular and established place of business at 3901 North Dallas Parkway, Plano, Texas 75093. Defendant's registered agent for service of process in Texas is Corporation Service Company, 211 E. 7th Street, Suite 620, Austin, TX 78701.

## **III. JURISDICTION AND VENUE**

6. This is an action for patent infringement which arises under the Patent Laws of the United States, in particular, 35 U.S.C. §§ 271, 281, 283, 284 and 285.

7. This Court has exclusive jurisdiction over the subject matter of this action under 28 U.S.C. §§ 1331 and 1338(a).

8. On information and belief, venue is proper in this District pursuant to 28 U.S.C. §§ 1391(b), 1391(c), and 1400(b) because Defendant has a regular and established place of business in this district, transacted business in this District, and has committed and/or induced acts of patent infringement in this district.

9. On information and belief, Defendant PAN 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 in this forum, including: (i) at least a portion of the infringements alleged herein; and (ii) regularly doing or soliciting business, engaging in other persistent courses of conduct, and/or deriving substantial revenue from goods and services provided to individuals in Texas and in this Judicial District.

#### IV. FACTUAL ALLEGATIONS

##### PATENTS-IN-SUIT

10. Parity Networks is the owner of all right, title and interest in and to U.S. Patent No. 6,252,848 (the “848 Patent”), entitled “System Performance in a Data Network Through Queue Management Based on Ingress Rate Monitoring,” issued on June 26, 2001.

11. Parity Networks is the owner of all right, title and interest in and to U.S. Patent No. 6,553,005 (the “005 patent”), entitled “Method and Apparatus for Load Apportionment among Physical Interfaces in Data Routers,” issued on April 22, 2003.

12. Parity Networks is the owner of all right, title and interest in and to U.S. Patent No. 6,763,394 (the “394 Patent”), entitled “Virtual Egress Packet Classification at Ingress,” issued on July 13, 2004.

13. Parity Networks is the owner of all right, title and interest in and to U.S. Patent No. 6,870,844 (the “844 Patent”), entitled “Apparatus and Methods for Efficient Multicasting of Data Packets,” issued on March 22, 2005.

14. Parity Networks is the owner of all right, title and interest in and to U.S. Patent No. 7,103,046 (the “046 patent”), entitled “Method and Apparatus for Intelligent Sorting and Process Determination of Data Packets Destined to a Central Processing Unit of a Router or Server on a Data Packet Network,” issued on September 5, 2006.

15. Parity Networks is the owner of all right, title and interest in and to U.S. Patent No. 7,107,352 (the “352 Patent”), entitled “Virtual Egress Packet Classification at Ingress,” issued on September 12, 2006.

16. Parity Networks is the owner of all right, title and interest in and to U.S. Patent No. 7,719,963 (the “963 Patent”), entitled “System for Fabric Patent Control,” issued on May 18, 2010.

17. Together, the foregoing patents are referred to herein as the “Patents-in-Suit.” Parity Networks is the assignee of the Patents-in-Suit, and has all rights to sue for infringement and collect past and future damages for the infringement thereof.

DEFENDANT’S ACTS

18. PAN provides next-generation firewalls to address threats across a broad range of environments including internet gateways, data centers and service provider ecosystems.

19. PAN models are based on the same architectural foundation.

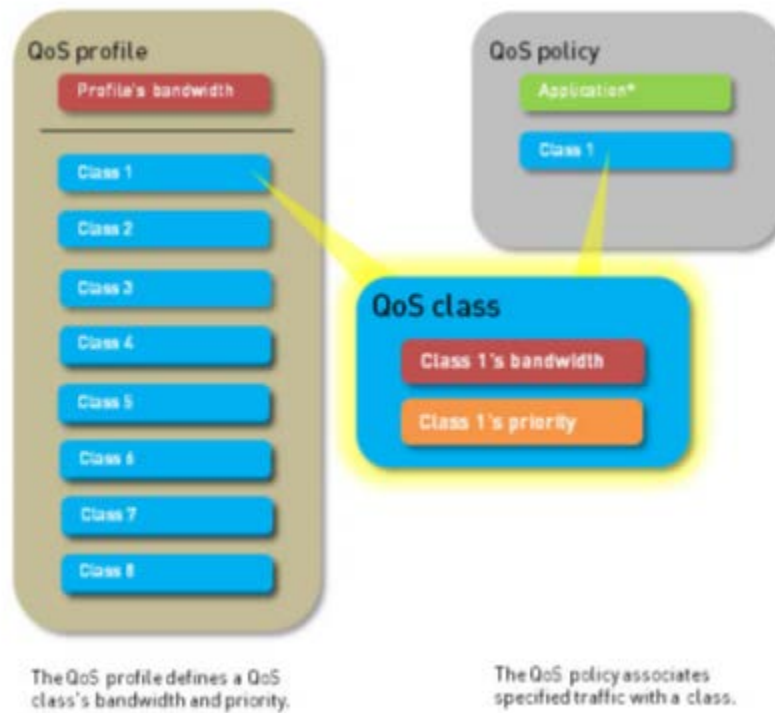
20. The PA-5000 Series delivers up to 20 Gbps of throughput using dedicated processing and memory for the key functional areas of networking, security, threat prevention and management. To ensure that management access is always available, irrespective of the traffic load, the data and control planes are physically separated.

21. The controlling element of the PA-5000 Series is PAN-OS™, a security-specific operating system that allows organizations to safely enable applications using App-ID, User-ID, Content-ID, GlobalProtect and, WildFire.

22. PAN-OS is the single operating system that powers PAN’s portfolio of next-generation firewalls.

23. Using PAN-OS, a QoS class determines the priority and bandwidth for traffic matching a QoS Policy rule. A QoS Profile rule defines QoS classes. There are up to eight definable QoS classes in a single QoS profile. Unless otherwise configured, traffic that does not match a QoS class is assigned a class of 4.

24. QoS Priority Queuing as implemented in PAN-OS is graphically depicted below.



25. QoS Priority Queuing and QoS Bandwidth Management, the fundamental mechanisms of a QoS configuration, are configured within the QoS class definition. For each QoS class, one can set a priority (real-time, high, medium, and low) and the maximum and guaranteed bandwidth for matching traffic. QoS priority queuing and bandwidth management determine the order of traffic and how traffic is handled upon entering or leaving a network.

26. PAN instructs its customers regarding the implementation and operation of the accused instrumentalities, including through its techdocs facility and at <https://docs.paloaltonetworks.com/pan-os#>.

27. On information of belief, Defendant PAN also implements contractual protections in the form of license and use restrictions with its customers to preclude the unauthorized reproduction, distribution and modification of its software.

28. Moreover, on information and belief, Defendant PAN implements technical precautions to attempt to thwart customers who would circumvent the intended operation of PAN's products.

PRIOR KNOWLEDGE OF THE PATENTS-IN-SUIT

29. By letters dated October 5, 2016 and November 18, 2016 (the "Notice Letters"), PAN was provided and actually received notice of the Patents-in-Suit, and consequently has actual or constructive knowledge of each of them.

**V. COUNTS OF PATENT INFRINGEMENT**

COUNT ONE  
INFRINGEMENT OF U.S. PATENT NO. 6,252,848

30. Parity Networks incorporates by reference its allegations in Paragraphs 1-29 as if fully restated in this paragraph.

31. Parity Networks is the assignee and owner of all right, title and interest to the '848 Patent. Parity Networks has the legal right to enforce the patent, sue for infringement, and seek equitable relief and damages.

32. On information and belief, Defendant PAN, without authorization or license from Parity Networks, has been and is presently directly infringing at least claim 15 of the '848 Patent, as infringement is defined by 35 U.S.C. § 271(a), including through making, using (including for testing purposes), selling and offering for sale methods and articles infringing one or more claims of the '848 Patent. Defendant PAN is thus liable for direct infringement of the '848 Patent pursuant to 35 U.S.C. § 271(a). Exemplary infringing products include the PAN PA-5000 Series Firewall running PAN-OS, which includes multiple ingress ports with output queues and wherein the ingress ports are configured to receive packets from multiple ingress flows and monitor their

characteristics. Each packet is marked with a marking based on criteria including the ingress flow rate and the flow profile.

33. On information and belief, upon receipt of one or more of the Notice Letters, or at least since the filing of the Original Complaint, Defendant PAN, without authorization or license from Parity Networks, has been and is presently indirectly infringing at least claim 1 of the '848 Patent, including actively inducing infringement of the '848 Patent under 35 U.S.C. § 271(b). Such inducements include without limitation, with specific intent to encourage the infringement, knowingly inducing consumers to use infringing articles and methods that PAN knows or should know infringe one or more claims of the '848 Patent. PAN instructs its customers to make and use the patented inventions of the '848 Patent by operating PAN's products in accordance with PAN's specifications. PAN specifically intends its customers to infringe by implementing its PAN-OS to configure QoS priority queuing to classify, police, shape and mark traffic in an infringing manner.

34. On information and belief, Defendant PAN, without authorization or license from Parity Networks, has been and is presently indirectly infringing at least claim 1 of the '848 Patent, including contributory infringement of the '848 Patent under 35 U.S.C. § 271(c) and/or § 271(f), either literally and/or under the doctrine of equivalents, by selling, offering for sale, and/or importing into the United States, the infringing products. PAN knows that the infringing products (i) constitute a material part of the inventions claimed in the '848 Patent; (ii) are especially made or adapted to infringe the '848 Patent; (iii) are not staple articles or commodities of commerce suitable for non-infringing use; and (iv) are components used for or in operating systems used to sort and process data packets into two or more categories of different priority for processing and a queue for queuing sorted packets destined for the CPU in an infringing manner.

35. As a result of PAN's infringement of the '848 Patent, Parity Networks has suffered monetary damages, and is entitled to an award of damages adequate to compensate it for such infringement under 35 U.S.C. § 284, but in no event, less than a reasonable royalty.

COUNT TWO  
INFRINGEMENT OF U.S. PATENT NO. 6,553,005

36. Parity Networks incorporates by reference its allegations in Paragraphs 1-35 as if fully restated in this paragraph.

37. Parity Networks is the assignee and owner of all right, title and interest to the '005 Patent. Parity Networks has the legal right to enforce the patent, sue for infringement, and seek equitable relief and damages.

38. On information and belief, Defendant PAN, without authorization or license from Parity Networks, has been and is presently directly infringing at least claim 1 of the '005 Patent, as infringement is defined by 35 U.S.C. § 271(a), including through making, using (including for testing purposes), selling and offering for sale methods and articles infringing one or more claims of the '005 Patent. Defendant PAN is thus liable for direct infringement of the '005 Patent pursuant to 35 U.S.C. § 271(a). Exemplary infringing products include the PAN PA-5000 Series Firewall running PAN-OS, which includes multiple ports with output queues and wherein the ingress ports are configured to receive packets from multiple ingress flows. The products route packets having a plurality of candidate egress ports, including identifying a set of egress ports based on a source IP address.

39. On information and belief, upon receipt of one or more of the Notice Letters, or at least since the filing of the Original Complaint, Defendant PAN, without authorization or license from Parity Networks, has been and is presently indirectly infringing at least claim 1 of the '005 Patent, including actively inducing infringement of the '005 Patent under 35 U.S.C. § 271(b). Such



inducements include without limitation, with specific intent to encourage the infringement, knowingly inducing consumers to use infringing articles and methods that PAN knows or should know infringe one or more claims of the '005 Patent. PAN instructs its customers to make and use the patented inventions of the '005 patent by operating PAN's products in accordance with PAN's specifications. PAN specifically intends its customers to infringe by implementing its devices to implement Link Aggregation (LAG) to aggregate interface groups and IP hashing and to choose a set of egress ports in an infringing manner, as set forth above.

40. On information and belief, Defendant PAN, without authorization or license from Parity Networks, has been and is presently indirectly infringing at least claim 1 of the '005 Patent, including contributory infringement of the '005 Patent under 35 U.S.C. § 271(c) and/or § 271(f), either literally and/or under the doctrine of equivalents, by selling, offering for sale, and/or importing into the United States, the infringing products. PAN knows that the infringing products (i) constitute a material part of the inventions claimed in the '005 Patent; (ii) are especially made or adapted to infringe the '005 Patent; (iii) are not staple articles or commodities of commerce suitable for non-infringing use; and (iv) are components used for or in operating systems used to implement Link Aggregation (LAG) to aggregate interface groups and IP hashing and to choose a set of egress ports in an infringing manner, as set forth above.

41. As a result of PAN's infringement of the '005 Patent, Parity Networks has suffered monetary damages, and is entitled to an award of damages adequate to compensate it for such infringement under 35 U.S.C. § 284, but in no event, less than a reasonable royalty.

COUNT THREE  
INFRINGEMENT OF U.S. PATENT NO. 6,763,394

42. Parity Networks incorporates by reference its allegations in Paragraphs 1-41 as if fully restated in this paragraph.

43. Parity Networks is the assignee and owner of all right, title and interest to the '394 Patent. Parity Networks has the legal right to enforce the patent, sue for infringement, and seek equitable relief and damages.

44. On information and belief, Defendant PAN, without authorization or license from Parity Networks, has been and is presently directly infringing at least claim 13 of the '394 Patent, as infringement is defined by 35 U.S.C. § 271(a), including through making, using (including for testing purposes), selling and offering for sale methods and articles infringing one or more claims of the '394 Patent. Defendant PAN is thus liable for direct infringement of the '394 Patent pursuant to 35 U.S.C. § 271(a). Exemplary infringing products include PAN PA-5000 Series Firewall running PAN-OS, which includes rulebases for filtering and dropping of packets implemented at the ingress port for egress pass/drop determination.

45. On information and belief, upon receipt of one or more of the Notice Letters, or at least since the filing of the Original Complaint, Defendant PAN, without authorization or license from Parity Networks, has been and is presently indirectly infringing at least claim 13 of the '394 Patent, including actively inducing infringement of the '394 Patent under 35 U.S.C. § 271(b). Such inducements include without limitation, with specific intent to encourage the infringement, knowingly inducing consumers to use infringing articles and methods that PAN knows or should know infringe one or more claims of the '394 Patent. PAN instructs its customers to make and use the patented inventions of the '394 Patent by operating PAN's products in accordance with PAN's specifications. PAN specifically intends its customers to infringe by designing its devices to implement rulebases for filtering and dropping of packets implemented at the ingress port for egress pass/drop determination.

46. On information and belief, Defendant PAN, without authorization or license from Parity Networks, has been and is presently indirectly infringing at least claim 1 of the '394 Patent, including contributory infringement of the '394 Patent under 35 U.S.C. § 271(c) and/or § 271(f), either literally and/or under the doctrine of equivalents, by selling, offering for sale, and/or importing into the United States, the infringing products. PAN knows that the infringing products (i) constitute a material part of the inventions claimed in the '394 Patent; (ii) are especially made or adapted to infringe the '394 Patent; (iii) are not staple articles or commodities of commerce suitable for non-infringing use; and (iv) are components used for or in operating systems used to implement rulebases for filtering and dropping of packets implemented at the ingress port for egress pass/drop determination.

47. As a result of PAN's infringement of the '394 Patent, Parity Networks has suffered monetary damages, and is entitled to an award of damages adequate to compensate it for such infringement under 35 U.S.C. § 284, but in no event, less than a reasonable royalty.

COUNT FOUR  
INFRINGEMENT OF U.S. PATENT NO. 6,870,844

48. Parity Networks incorporates by reference its allegations in Paragraphs 1-47 as if fully restated in this paragraph.

49. Parity Networks is the assignee and owner of all right, title and interest to the '844 Patent. Parity Networks has the legal right to enforce the patent, sue for infringement, and seek equitable relief and damages.

50. On information and belief, Defendant PAN, without authorization or license from Parity Networks, has been and is presently directly infringing at least claim 1 of the '844 Patent, as infringement is defined by 35 U.S.C. § 271(a), including through making, using (including for testing purposes), selling and offering for sale methods and articles infringing one or more claims

of the '844 Patent. Defendant PAN is thus liable for direct infringement of the '844 Patent pursuant to 35 U.S.C. § 271(a). Exemplary infringing products include the PAN PA-200 Series Firewall running PAN-OS, which incorporates a multi-cast capable component for replicating and/or readdressing the replicated data packets.

51. On information and belief, upon receipt of one or more of the Notice Letters, or at least since the filing of the Original Complaint, Defendant PAN, without authorization or license from Parity Networks, has been and is presently indirectly infringing at least claim 1 of the '844 Patent, including actively inducing infringement of the '844 Patent under 35 U.S.C. § 271(b). Such inducements include without limitation, with specific intent to encourage the infringement, knowingly inducing consumers to use infringing articles and methods that PAN knows or should know infringe one or more claims of the '844 Patent. PAN instructs its customers to make and use the patented inventions of the '844 Patent by operating PAN's products in accordance with PAN's specifications. PAN specifically intends its customers to infringe by enabling multicast on a virtual router and enabling Protocol Independent Multicast (PIM) for an ingress and egress interface in order for the interfaces to receive or forward multicast packets.

52. On information and belief, Defendant PAN, without authorization or license from Parity Networks, has been and is presently indirectly infringing at least claim 1 of the '844 Patent, including contributory infringement of the '844 Patent under 35 U.S.C. § 271(c) and/or § 271(f), either literally and/or under the doctrine of equivalents, by selling, offering for sale, and/or importing into the United States, the infringing products. PAN knows that the infringing products (i) constitute a material part of the inventions claimed in the '844 Patent; (ii) are especially made or adapted to infringe the '844 Patent; (iii) are not staple articles or commodities of commerce suitable for non-infringing use; and (iv) are components used for or in operating systems used to

enable packet multicasting on a virtual router including through its implementation of Protocol Independent Multicast (PIM) for an ingress and egress interface in order for the interfaces to receive or forward multicast packets.

53. As a result of PAN's infringement of the '844 Patent, Parity Networks has suffered monetary damages, and is entitled to an award of damages adequate to compensate it for such infringement under 35 U.S.C. § 284, but in no event, less than a reasonable royalty.

COUNT FIVE  
INFRINGEMENT OF U.S. PATENT NO. 7,103,046

54. Parity Networks incorporates by reference its allegations in Paragraphs 1-53 as if fully restated in this paragraph.

55. Parity Networks is the assignee and owner of all right, title and interest to the '046 Patent. Parity Networks has the legal right to enforce the patent, sue for infringement, and seek equitable relief and damages.

56. On information and belief, Defendant PAN, without authorization or license from Parity Networks, has been and is presently directly infringing at least claim 1 of the '046 Patent, as infringement is defined by 35 U.S.C. § 271(a), including through making, using (including for testing purposes), selling and offering for sale methods and articles infringing one or more claims of the '046 Patent. Defendant PAN is thus liable for direct infringement of the '046 Patent pursuant to 35 U.S.C. § 271(a). Exemplary infringing products include PAN PA-5000 Series Firewall running PAN-OS, which includes multiple dataplane processors for parallel packet processing and hardware queues of a network access controller (NAC) for queuing the packets according to category

57. On information and belief, upon receipt of one or more of the Notice Letters, or at least since the filing of the Original Complaint, Defendant PAN, without authorization or license

from Parity Networks, has been and is presently indirectly infringing at least claim 15 of the '046 Patent, including actively inducing infringement of the '046 Patent under 35 U.S.C. § 271(b). Such inducements include without limitation, with specific intent to encourage the infringement, knowingly inducing consumers to use infringing articles and methods that PAN knows or should know infringe one or more claims of the '046 Patent. PAN instructs its customers to make and use the patented inventions of the '046 Patent by operating PAN's products in accordance with PAN's specifications. PAN specifically intends its customers to infringe by implementing multiple dataplane processors for parallel packet processing and hardware queues of a network access controller (NAC) for queuing the packets according to category

58. On information and belief, Defendant PAN, without authorization or license from Parity Networks, has been and is presently indirectly infringing at least claim 1 of the '046 Patent, including contributory infringement of the '046 Patent under 35 U.S.C. § 271(c) and/or § 271(f), either literally and/or under the doctrine of equivalents, by selling, offering for sale, and/or importing into the United States, the infringing products. PAN knows that the infringing products (i) constitute a material part of the inventions claimed in the '046 Patent; (ii) are especially made or adapted to infringe the '046 Patent; (iii) are not staple articles or commodities of commerce suitable for non-infringing use; and (iv) are components used for or in operating systems used to implement multiple dataplane processors for parallel packet processing and hardware queues of a network access controller (NAC) for queuing the packets according to category

59. As a result of PAN's infringement of the '046 Patent, Parity Networks has suffered monetary damages, and is entitled to an award of damages adequate to compensate it for such infringement under 35 U.S.C. § 284, but in no event, less than a reasonable royalty.

COUNT SIX  
INFRINGEMENT OF U.S. PATENT NO. 7,107,352

60. Parity Networks incorporates by reference its allegations in Paragraphs 1-59 as if fully restated in this paragraph.

61. Parity Networks is the assignee and owner of all right, title and interest to the '352 Patent. Parity Networks has the legal right to enforce the patent, sue for infringement, and seek equitable relief and damages.

62. On information and belief, Defendant PAN, without authorization or license from Parity Networks, has been and is presently directly infringing at least claim 1 of the '352 Patent, as infringement is defined by 35 U.S.C. § 271(a), including through making, using (including for testing purposes), selling and offering for sale methods and articles infringing one or more claims of the '352 Patent. Defendant PAN is thus liable for direct infringement of the '352 Patent pursuant to 35 U.S.C. § 271(a). Exemplary infringing products include PAN PA-5000 Series Firewall running PAN-OS, which includes rulebases for filtering and dropping of packets implemented at the ingress port for egress pass/drop determination.

63. On information and belief, upon receipt of one or more of the Notice Letters, or at least since the filing of the Original Complaint, Defendant PAN, without authorization or license from Parity Networks, has been and is presently indirectly infringing at least claim 1 of the '352 Patent, including actively inducing infringement of the '352 Patent under 35 U.S.C. § 271(b). Such inducements include without limitation, with specific intent to encourage the infringement, knowingly inducing consumers to use infringing articles and methods that PAN knows or should know infringe one or more claims of the '352 Patent. PAN instructs its customers to make and use the patented inventions of the '352 Patent by operating PAN's products in accordance with

PAN's specifications. PAN specifically intends its customers to infringe by implementing its devices to perform traffic policing using rulebases to create multiple LUTs, as set forth above.

64. On information and belief, Defendant PAN, without authorization or license from Parity Networks, has been and is presently indirectly infringing at least claim 1 of the '352 Patent, including contributory infringement of the '352 Patent under 35 U.S.C. § 271(c) and/or § 271(f), either literally and/or under the doctrine of equivalents, by selling, offering for sale, and/or importing into the United States, the infringing products. PAN knows that the infringing products (i) constitute a material part of the inventions claimed in the '352 Patent; (ii) are especially made or adapted to infringe the '352 Patent; (iii) are not staple articles or commodities of commerce suitable for non-infringing use; and (iv) are components used for or in operating systems used to perform traffic policing using rulebases to create multiple LUTs, as set forth above.

65. As a result of PAN's infringement of the '352 Patent, Parity Networks has suffered monetary damages, and is entitled to an award of damages adequate to compensate it for such infringement under 35 U.S.C. § 284, but in no event, less than a reasonable royalty.

COUNT SEVEN  
INFRINGEMENT OF U.S. PATENT NO. 7,719,963

66. Parity Networks incorporates by reference its allegations in Paragraphs 1-65 as if fully restated in this paragraph.

67. Parity Networks is the assignee and owner of all right, title and interest to the '963 Patent. Parity Networks has the legal right to enforce the patent, sue for infringement, and seek equitable relief and damages.

68. On information and belief, Defendant PAN, without authorization or license from Parity Networks, has been and is presently directly infringing at least claim 3 of the '963 Patent, as infringement is defined by 35 U.S.C. § 271(a), including through making, using (including for



testing purposes), selling and offering for sale methods and articles infringing one or more claims of the '963 Patent. Defendant PAN is thus liable for direct infringement of the '963 Patent pursuant to 35 U.S.C. § 271(a). Exemplary infringing products include PAN PA-7000 Series Firewall running PAN-OS, which have an internal fabric network and Active Queue Management (AQM) for random early detection/drop (RED) and weighted random early detection/drop (WRED).

69. On information and belief, upon receipt of one or more of the Notice Letters, or at least since the filing of the Original Complaint, Defendant PAN, without authorization or license from Parity Networks, has been and is presently indirectly infringing at least claim 1 of the '963 Patent, including actively inducing infringement of the '963 Patent under 35 U.S.C. § 271(b). Such inducements include without limitation, with specific intent to encourage the infringement, knowingly inducing consumers to use infringing articles and methods that PAN knows or should know infringe one or more claims of the '963 Patent. PAN instructs its customers to make and use the patented inventions of the '963 Patent by operating PAN's products in accordance with PAN's specifications. PAN specifically intends its customers to infringe by implementing Active Queue Management (AQM) so that a queue manager increases the rate of discarding data above a preset threshold.

70. On information and belief, Defendant PAN, without authorization or license from Parity Networks, has been and is presently indirectly infringing at least claim 1 of the '963 Patent, including contributory infringement of the '963 Patent under 35 U.S.C. § 271(c) and/or § 271(f), either literally and/or under the doctrine of equivalents, by selling, offering for sale, and/or importing into the United States, the infringing products. PAN knows that the infringing products (i) constitute a material part of the inventions claimed in the '963 Patent; (ii) are especially made or adapted to infringe the '963 Patent; (iii) are not staple articles or commodities of commerce

suitable for non-infringing use; and (iv) are components used for or in operating systems used to implement Active Queue Management (AQM) so that a queue manager increases the rate of discarding data above a preset threshold.

71. As a result of PAN's infringement of the '963 Patent, Parity Networks has suffered monetary damages, and is entitled to an award of damages adequate to compensate it for such infringement under 35 U.S.C. § 284, but in no event, less than a reasonable royalty.

#### **VI. WILLFUL INFRINGEMENT**

72. Plaintiff alleges upon information and belief that, Defendant has on multiple occasions including by virtue of the Notice Letters dated October 5, 2016 and November 28, 2016, been notified in writing of the Patents-in-Suit. Notwithstanding this knowledge, Defendant has knowingly or with reckless disregard willfully infringed one or more of the foregoing Patents-in-Suit. Defendant has thus received actual notice of infringement of the Patents-in-Suit, disregarded that notice and despite knowledge of the Patents-in-Suit, intentionally and/or knowingly continued infringing Plaintiff's valid patent rights.

73. This objective risk was either known or so obvious that it should have been known to Defendant. Accordingly, Plaintiff seeks enhanced damages pursuant to 35 U.S.C. § 284.

#### **VII. JURY DEMAND**

74. Plaintiff Parity Networks demands a trial by jury of all matters to which it is entitled to trial by jury, pursuant to FED. R. CIV. P. 38.

#### **VIII. PRAYER FOR RELIEF**

WHEREFORE, Parity Networks prays for judgment and seeks relief against Defendant as follows:

- A. That the Court determine that one or more claims of the Patents-in-Suit is infringed by Defendant PAN, either literally or under the doctrine of equivalents;

- B. That the Court award damages adequate to compensate Parity Networks for the patent infringement that has occurred, together with prejudgment and post-judgment interest and costs, and an ongoing royalty for continued infringement;
- C. That the Court permanently enjoin Defendant pursuant to 35 U.S.C. § 283;
- D. That the Court award enhanced damages pursuant to 35 U.S.C. §284; and
- E. That the Court award such other relief to Parity Networks as the Court deems just and proper.

DATED: April 18, 2019

Respectfully submitted,

/s/ Andrew G. DiNovo

Andrew G. DiNovo

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