

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

ORCKIT CORPORATION,

Plaintiff,

v.

JUNIPER NETWORKS, INC.,

Defendant.

Civil Action No.

JURY TRIAL DEMANDED

COMPLAINT FOR PATENT INFRINGEMENT

Plaintiff Orckit Corporation (“Orckit” or “Plaintiff”) submits this First Complaint for patent infringement against Defendant Juniper Networks, Inc. (“Juniper” or “Defendant”), requests a trial by jury, and alleges the following upon actual knowledge with respect to itself and its own acts and upon information and belief as to all other matters:

NATURE OF ACTION

1. This is an action for patent infringement. Orckit alleges that Juniper infringes U.S. Patents Nos. 7,545,740 (“the ’740 Patent”), 8,830,821 (“the ’821 Patent”), and 10,652,111 (“the ’111 Patent”) (collectively, “the Asserted Patents”), copies of which are attached hereto.

2. Orckit alleges that Juniper: (1) directly and indirectly infringes the Asserted Patents by making, using, offering for sale, selling, and importing certain networking hardware and software; (2) induces infringement of the Asserted Patents and contributes to others’ infringement of the Asserted Patents; and (3) infringes the Asserted Patents willfully. Orckit seeks damages and other relief for Juniper’s wrongful conduct.

PARTIES

3. Orckit is a Delaware corporation and owns the Asserted Patents by assignment.

4. Juniper is a Delaware corporation with its principal place of business at 1133 Innovation Way, Sunnyvale, California 94089-1228.

5. Juniper is registered to do business in Delaware, and, on information and belief, conducts business in Delaware. On information and belief, a substantial part of the events giving rise to Plaintiff's claims, including acts of patent infringement, have occurred in Delaware and this Judicial District.

6. Juniper has a permanent and continuous presence in Delaware and this Judicial District.

JURISDICTION AND VENUE

7. This action arises under the patent laws of the United States, 35 U.S.C. § 271 *et seq.* The Court has subject matter jurisdiction pursuant to 28 U.S.C. §§ 1331 and 1338(a).

8. The Court has personal jurisdiction over Juniper because it is incorporated in Delaware. Additionally, as alleged above, Juniper has sufficient minimum contacts with Delaware so that this action does not offend due process or the traditional notions of fair play and substantial justice. Among other factors, Juniper is (i) registered to do business in Delaware, (ii) is incorporated in and has purposefully availed itself of the rights and benefits of the laws of Delaware and this Judicial District, and (iii) has a continuous presence in and systematic contact with this district. Upon information and belief, Juniper derives substantial revenue from the goods and services that it provides to its customers in Delaware directly or through intermediaries both generally and with respect to the allegations in this Complaint. Juniper also undertakes a portion of its infringing activities in Delaware—including by making, using, importing, offering for sale,

and selling products and services that infringe the Asserted Patents—directly and through its distributors, retailers, and other intermediaries.

9. Venue is proper in this judicial district pursuant to 28 U.S.C. §§1391(b), (c), (d) and 1400(b) because Juniper resides in this District under the Supreme Court’s opinion in *TC Heartland v. Kraft Foods Group Brands LLC*, 137 S. Ct. 1514 (2017) through its incorporation in this District. Additionally, upon information and belief, Juniper has a permanent and continuous presence in and has committed acts of infringement in this Judicial District.

FACTUAL ALLEGATIONS

Orckit Communications Ltd. and Its Breakthrough Communications Technology

10. The patented technology is rooted in research by Orckit Communications Ltd. (later reorganized and renamed Orckit-Corrigent Ltd.), a company founded in Israel in 1990 by Izhak Tamir. The company was a pioneer in the development of infrastructure-level networking products, and in its first decade became the market leader in Asymmetric Digital Subscriber Line (ADSL) technology, winning a client base that included some of the world’s preeminent telecommunications providers. The company went public, and in 1996 was listed in the United States on the Nasdaq Stock Exchange.

11. Building on that initial success, Orckit Communications Ltd. turned its attention to overcoming significant limitations in Ethernet, the predominant technology used for local area networks used in offices, schools and other local environments. With the proliferation of data and the development of the Internet, demand for data transmission skyrocketed. While Ethernet could be used to connect a limited number of computers, it was not well suited to the delivery of video, voice, and other applications with higher bandwidth requirements for a larger number of users. The existing standard for delivering voice communications, known as the Synchronous Optical

Network (“SONET”) protocol, was not a viable alternative because it was not designed to process data in an efficient and scalable way. As a result, providers like cable companies were required to develop and install their own infrastructure to deliver services and could not rely on a single network to provide different services in parallel.

12. Orckit Communications Ltd.’s solutions addressed those shortcomings. It quickly recognized that existing solutions could accommodate network traffic only so long as data occupied only a small portion of overall network traffic. The company’s technology overcame those limitations by enhancing Ethernet switching and routing to optimize the transmission of data, voice and video, including those using Internet Protocol (“IP”) telecommunications networks. The capacity, reliability, and resilience offered by Orckit Communications Ltd.’s inventions opened up the possibility of the transmission of data, voice, and video services on the same network—the hugely valuable “bundled services” or “triple-play services” sought by both telecommunications companies and their customers.

13. Between 2000 and 2010, Orckit Communications Ltd. invested hundreds of millions of US dollars in research and development of those solutions. It earned recognition around the world for those innovations and won contracts to rebuild national telecommunications infrastructure systems along with hundreds of patents—including those at issue in this lawsuit.

14. With the economic downturn of 2007 and 2008, many of Orckit Communications Ltd.’s most significant potential customers dramatically reduced their infrastructure spending. Even with its superior technology the company was unable to weather the global recession and ultimately went into liquidation.

15. Plaintiff Orckit Corporation obtained all rights to the Asserted Patents.

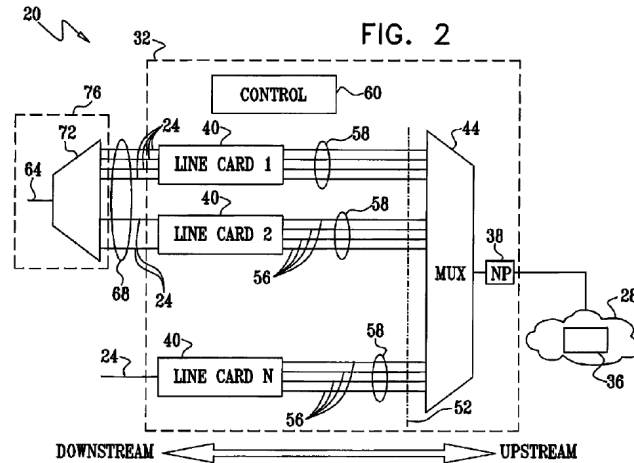
The Asserted Patents

U.S. Patent No. 7,545,740

16. Orckit is the lawful owner of all right, title, and interest in U.S. Patent No. 7,545,740 (“the ’740 Patent”) entitled “TWO-WAY LINK AGGREGATION” (attached as Exhibit 2), including the right to sue and recover for infringement thereof. The ’740 Patent was duly and legally issued on June 9, 2009, naming David Zelig, Ronen Solomon, and Uzi Khill as the inventors.

17. The ’740 Patent has 31 claims: 12 independent claims and 19 dependent claims.

18. The ’740 Patent presented novel and unconventional apparatuses and methods for (among other things) “connecting users to a communication network with increased capacity and use of service.” Ex. 1, ’740 Patent at 1:39-41. The inventions patented in the ’740 Patent, for example, distribute data frames among “parallel physical links, so as to balance the traffic load among the links,” a process that in turn enables the network to “deliver a higher bandwidth at a given [quality of service (‘QoS’)] or to improve the QoS at a given bandwidth.” *Id.* at 1:48-55. The patented “load balancing operation in embodiments of the present invention enables statistical multiplexing of the frames, in which there is no direct relationship or connection between user ports and backplane traces.” *Id.* at 2:1-4. Furthermore, “[i]n some embodiments, two or more physical user ports are aggregated into a [link aggregation] group external to the network element, so as to form an aggregated user port having a higher bandwidth.” *Id.* at 2:5-8. One embodiment of the inventions of the ’740 Patent is shown in Fig. 2, reproduced below:



19. The claims of the '740 Patent, including claim 1 (reproduced below), recite at least these inventive concepts of the '740 Patent:

1. A method for communicating, comprising:

coupling a network node to one or more interface modules using a first group of first physical links arranged in parallel, at least one of said first physical links being a bi-directional link operative to communicate in both an upstream direction and a downstream direction;

coupling each of the one or more interface modules to a communication network using a second group of second physical links arranged in parallel, at least one of said second physical being a bi-directional link operative to communicate in both an upstream direction and a downstream direction;

receiving a data frame having frame attributes sent between the communication network and the network node;

selecting, in a single computation based on at least one of the frame attributes, a first physical link out of the first group and a second physical link out of the second group; and

sending the data frame over the selected first and second physical links,

said sending comprising communicating along at least one of said bi-directional links.

Id. at 10:65-11:20 (claim 1).

20. The subject matter described and claimed in the '740 Patent, including the subject matter of claim 1, represented an improvement in computer and communications functionality, performance, and efficiency, and was novel and not well-understood, routine, or conventional at the time of the invention of the '740 Patent.

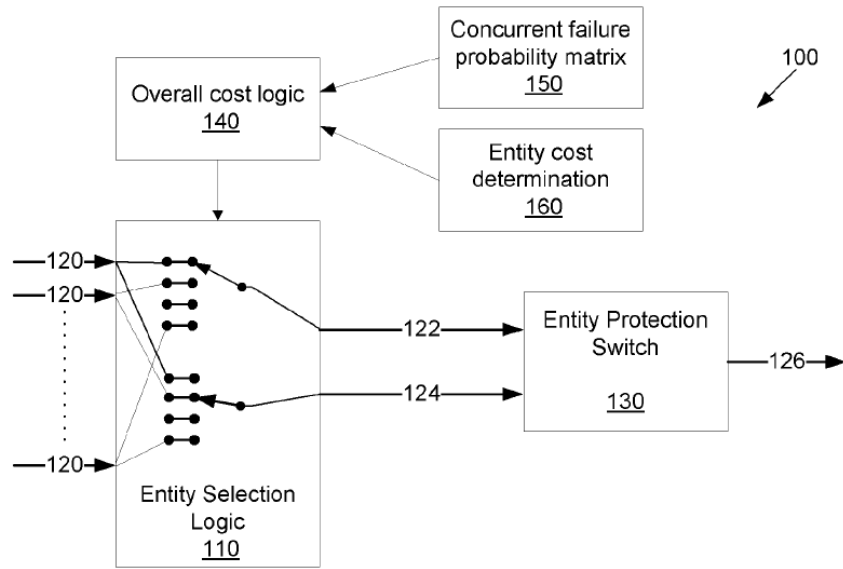
21. Juniper had knowledge of the '740 Patent, including at least as of May 2017 when Orckit IP LLC ("Orckit IP")—a prior owner of the Asserted Patents—initiated discussions with Juniper about its patent portfolio, as described and alleged below, and at least as of the filing of this Complaint. *See* Ex. 4.

U.S. Patent No. 8,830,821

22. Orckit is the lawful owner of all right, title, and interest in U.S. Patent No. 8,830,821 ("the '821 Patent") entitled "METHOD FOR SUPPORTING MPLS TRANSPORT PATH RECOVERY WITH MULTIPLE PROTECTION ENTITIES" (attached as Exhibit 3), including the right to sue and recover for infringement thereof. The '821 Patent was duly and legally issued on September 9, 2014, naming Daniel Cohn and Rafi Ram as the inventors.

23. The '821 Patent has 20 claims: three independent claims and 17 dependent claims.

24. The '821 Patent presented novel and unconventional apparatuses and methods for (among other things) selecting network transport entities between a first and second endpoint, using working and protection entities to minimize simultaneous failure and/or a cost function. Ex. 2, '821 Patent, at Abstract; 2:5-21. The inventions patented in the '821 Patent, for example, switch between working and protection entities, determine a probability of concurrent failure of both entities, and reselect an entity pair. *Id.* at 2:32-43. One embodiment of the inventions of the '821 Patent is shown in Fig. 1, reproduced below:



25. The claims of the '821 Patent, including claim 14 (reproduced below), recite at least these inventive concepts of the '821 Patent:

14. A system for selecting entities within an MPLS network, comprising:

a data structure comprising a plurality of transport entity descriptors;

an entity protection switch configured to switch between a working entity and a protection entity; and

digital logic configured to select said working entity and said protection entity from said plurality of transport entity descriptors, comprising: logic configured to determine a probability of concurrent failure of said working entity and said protection entity;

logic configured to determine an entity cost of said plurality of transport entity descriptors; and

logic configured to reselect said working entity and said protection entity from said plurality of transport entity descriptors upon a reselection event,

wherein said reselection event is selected from a group consisting of adding an entity to said plurality of transport entities, removing an entity from said plurality of transport entities, an operational status change for one of said plurality of transport entities, and a change in over all cost for one of said plurality of transport entities.

Id. at 8:42-63 (claim 14).

26. The subject matter described and claimed in the '821 Patent, including the subject matter of claim 14, represented an improvement in computer and communications functionality, performance and efficiency, and was novel and not well-understood, routine, or conventional at the time of the invention of the '821 Patent.

27. Juniper had knowledge of the '821 Patent, including at least as of May 2017 when Orckit IP initiated discussions with Juniper about its patent portfolio, as described and alleged below, and at least as of the filing of this Complaint. *See* Ex. 4.

U.S. Patent No. 10,652,111

28. Orckit is the lawful owner of all right, title, and interest in U.S. Patent No. 10,652,111 (“the '111 Patent”) entitled “METHOD AND SYSTEM FOR DEEP PACKET INSPECTION IN SOFTWARE DEFINED NETWORKS” (attached as Exhibit 4), including the right to sue and recover for infringement thereof. The '111 Patent was duly and legally issued on May 12, 2020, naming Yossi Barsheshet, Simhon Doctori and Ronen Solomon as the inventors.

29. The '111 Patent has 54 claims: two independent claims and 52 dependent claims.

30. The '111 Patent presented novel and unconventional methods for (among other things) “deep packet inspection (DPI) in a software defined network (SDN), wherein the method is performed by a central controller of the SDN.” Ex. 3, '111 Patent at 2:28-30. As an example, unlike the prior art, the inventions patented in the '111 Patent enable the inspection or extraction of content from data packets belonging to a specific flow or session, thereby enabling security threat detection. *Id.* at 1:61-67. The patented inventions also decrease traffic delays between client and server, avoid overflowing the controller with data, and prevent the concentration of a single

point of failure for data traffic. *Id.* at 2:1-7. One embodiment of the inventions of the '111 Patent is shown in Fig. 1, reproduced below:

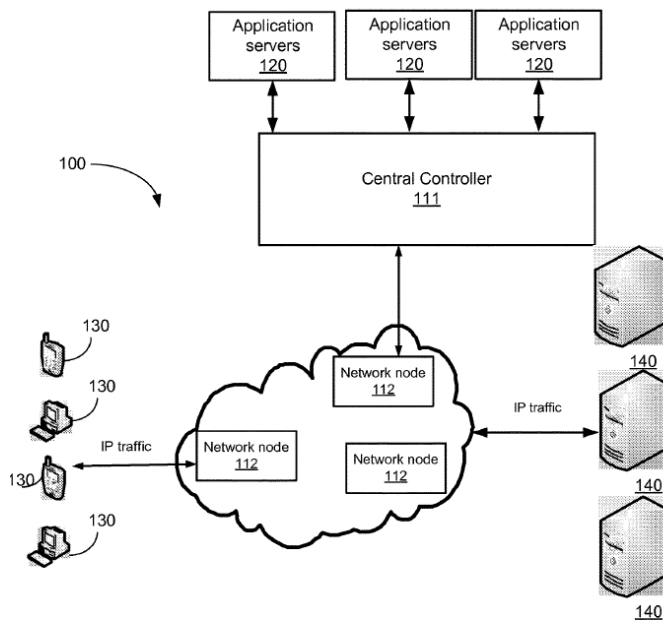


FIG. 1

31. The claims of the '111 Patent, including claim 1 (reproduced below), recite at least these inventive concepts of the '111 Patent:

1. A method for use with a packet network including a network node for transporting packets between first and second entities under control of a controller that is external to the network node, the method comprising:

sending, by the controller to the network node over the packet network, an instruction and a packet-applicable criterion;

receiving, by the network node from the controller, the instruction and the criterion;
 receiving, by the network node from the first entity over the packet network, a packet addressed to the second entity;

checking, by the network node, if the packet satisfies the criterion;

responsive to the packet not satisfying the criterion, sending, by the network node over the packet network, the packet to the second entity; and

responsive to the packet satisfying the criterion, sending the packet, by the network node over the packet network, to an entity that is included in the instruction and is other than the second entity.

Id. at 10:51-11:4 (claim 1).

32. The subject matter described and claimed in the '111 Patent, including the subject matter of claim 1, represented an improvement in computer and communications functionality, performance and efficiency, and was novel and not well-understood, routine, or conventional at the time of the invention of the '111 Patent.

33. Juniper had knowledge of the '111 Patent at least as of the filing of this Complaint.

BACKGROUND OF JUNIPER'S INFRINGING CONDUCT

34. Defendant Juniper Networks, Inc. is a computer networking company that makes, uses, sells, offers for sale in the United States, and/or imports into the United States, or has otherwise made, used, sold, offered for sale in the United States, and/or imported in the United States, routers, switches, and other networking equipment and software that infringe the Asserted Patents, and also has induced and contributed to and continues to induce and contribute to infringement of others who have made, used, sold, offered for sale in the United States, and/or imported in the United States, routers, switches, and other networking equipment and software that infringe the Asserted Patents.

35. A non-comprehensive list of products that infringe the Asserted Patents is set out in Appendices A-C hereto ("the Accused Products"). Juniper's infringement includes the making, using, selling, offering for sale and/or importing the listed products, and Juniper's active inducement of infringement, including by supplying the listed products to third parties that use those products to practice the claimed methods of the asserted patents. Orckit reserves the right to supplement and amend the list of Accused Products recited in Appendices A-C as permitted by the Court.

36. Juniper infringes and continues to infringe the Asserted Patents by making, using, selling, offering to sell, and/or importing, without license or authority, the Accused Products as alleged herein.

37. Juniper markets, advertises, offers for sale, and/or otherwise promotes the Accused Products and does so to induce, encourage, instruct, and aid one or more persons in the United States to make, use, sell, and/or offer to sell their Accused Products. For example, Juniper advertises, offers for sale, and/or otherwise promotes the Accused Products on its website. Juniper further publishes and distributes data sheets, manuals, and guides for the Accused Products, as set forth in detail below. Therein, Juniper describes and touts the use of the subject matter claimed in the Asserted Patents, as described and alleged below.

**BACKGROUND OF JUNIPER’S KNOWLEDGE OF THE INVENTIONS DESCRIBED
AND CLAIMED IN THE ASSERTED PATENTS**

38. Juniper has had knowledge of the Asserted Patents and the inventions described and claimed therein, including at least as of May 2017 when Orckit IP initiated discussions with Juniper about its patent portfolio. On May 9, 2017, Orckit IP sent a letter to Juniper concerning its “Patent Portfolio.” Ex. 4 (“May 2017 Letter from Orckit IP to Juniper”). In that letter, Orckit IP notified Juniper that it:

... owns a patent portfolio related to certain communications technologies developed by Orckit Communications Ltd. And Corrigent Systems Ltd. (f/k/a Orckit-Corrigent Ltd.). Orckit IP’s patent portfolio includes over 100 patents and pending patent applications. One or more of these patents and patent applications may be of interest to Juniper Networks and require your company’s attention.

Ex. 4 at 1.

39. Orckit IP further identified several Juniper Networks products, including switches and routers, including certain of the Accused Products, which are accused of infringing the Asserted Patents. *Id.* Orckit IP concluded that “Juniper Networks may be interested in obtaining

a license to (or acquiring) the ‘508 Patent and/or other patent assets from Orckit IP’s patent portfolio, which Orckit IP is willing to discuss,” and enclosed “an informal schedule of Orckit IP’s patent portfolio.” *Id.* at 2.

40. Juniper has also had knowledge of the Asserted Patents and the inventions described and claimed therein since at least as of the filing of this Complaint.

COUNT ONE: INFRINGEMENT OF U.S. PATENT 7,545,740

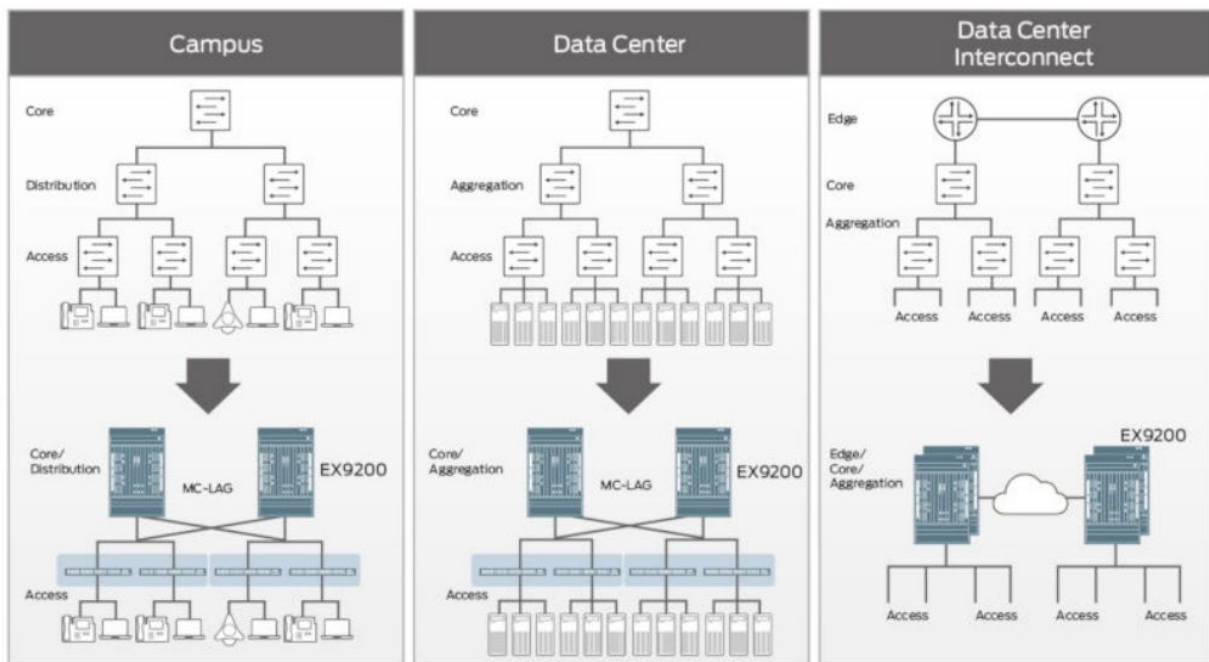
41. Juniper directly infringes at least claim 1 of the ’740 Patent by making, using, offering for sale, selling, and/or importing products, including at least the Accused Products, which include but are not limited to the products set forth in Appendix A (“the ’740 Accused Products”), that meet every limitation, either literally or under the doctrine of equivalents, of at least claim 1 of the ’740 Patent, in violation of 35 U.S.C. § 271(a).

42. The ’740 Accused Products, including the Juniper EX9200 line of Switches (“Juniper EX9200”), which is exemplary of all of the ’740 Accused Products, are used by Juniper and/or the end users of its products to practice a method for communication that includes the steps set forth in paragraphs ¶¶ 43-47 *infra*. For example, the ’740 Accused Products, including the Juniper EX9200 can be used to provide connectivity between network devices and the internet, *i.e.*, they are used to practice a method for communication. *See, e.g.*, EX9200 Ethernet Switch Datasheet (available at <https://www.juniper.net/content/dam/www/assets/datasheets/us/en/switches/ex9200-ethernet-switch-datasheet.pdf>) (“The EX9200 line of programmable, flexible and scalable modular Ethernet core switches simplifies the deployment of cloud applications, virtualized servers and rich media collaboration tools across campus and data center environments. The EX9200 is also a key component of Juniper’s AI-Driven Enterprise. The switch decouples the overlay network from the

underlay with technologies such as Ethernet VPN (EVPN) and Virtual Extensible LAN (VXLAN), addressing the needs of the modern enterprise network by allowing network administrators to create logical L2 networks over different L3 networks.”).

43. The '740 Accused Products, including the Juniper EX9200, are used to couple a network node to one or more interface modules using a first group of first physical links arranged in parallel, at least one of said first physical links being a bi-directional link operative to communicate in both an upstream direction and a downstream direction. For example, the Juniper EX9200 is used to couple a network node to one or more interface modules, for example, a variety of interface cards (including 10GbE/40GbE/100GbE cards with QSFP+ or CFP interfaces, 10GBASE-T cards, and 40GbE/100GbE cards with QSFP28 interfaces). *See, e.g.,* EX9200 Ethernet Switch Datasheet (available at <https://www.juniper.net/content/dam/www/assets/datasheets/us/en/switches/ex9200-ethernet-switch-datasheet.pdf>) (“The EX9200 chassis can also accommodate a flexible Modular Port Concentrator (MPC) line card, the EX9200-MPC, that can accept any combination of three modular interface cards (MICs): • EX9200-10XS-MIC, a 10-port 10GBASE-X (half-slot) MIC • EX9200-20F-MIC, a 20-port GBASE-X (half-slot) MIC • EX9200-40T-MIC, a 40-port 10/100/1000GBASE-T MIC that supports MACsec”). For further example, the interface card(s) are coupled to a network node through a first group of physical links, for example, Ethernet ports that connect the EX9200 to other Ethernet devices, such as servers, switches, or routers. *See, e.g.,* EX9200 Ethernet Switch Datasheet (available at <https://www.juniper.net/content/dam/www/assets/datasheets/us/en/switches/ex9200-ethernet-switch-datasheet.pdf>) (“Both Routing Engines feature AUX, console, and Ethernet ports on the front panel to support out-of-band system management and monitoring, while an external USB

port accommodates a removable media interface for manually installing Junos OS images”). For further example, the Ethernet ports are operative in both an upstream and a downstream direction, for example, they are full duplex ports that can transmit and receive data at the same time, in both directions. See, e.g., EX9200 Ethernet Switch Datasheet (available at <https://www.juniper.net/content/dam/www/assets/datasheets/us/en/switches/ex9200-ethernet-switch-datasheet.pdf>) (“The EX9200 switch fabric is capable of delivering up to 480 Gbps (full duplex) per slot”). In addition, the Ethernet ports are used in parallel as part of a link aggregation group (LAG), which the EX9200 supports through the use of a Link Aggregation Control Protocol (LACP).



See, e.g., EX9200 Ethernet Switch Datasheet (available at <https://www.juniper.net/content/dam/www/assets/datasheets/us/en/switches/ex9200-ethernet-switch-datasheet.pdf>) (“Layer 2 features: • 3ad – Link Aggregation Control Protocol (LACP)”).

44. The '740 Accused Products, including the Juniper EX9200, are used to couple each of the one or more interface modules to a communication network using a second group of second

physical links arranged in parallel, at least one of said second physical links being a bi-directional link operative to communicate in both an upstream direction and a downstream direction. For example, the EX9200 can be used to couple interface card(s) to a switch fabric in the EX9200 with a second group of physical links, for example, switch fabric ports. *See, e.g.*, EX9200 Ethernet Switch Datasheet (available at <https://www.juniper.net/content/dam/www/assets/datasheets/us/en/switches/ex9200-ethernet-switch-datasheet.pdf>) (“Data plane signals pass directly from the EX9200 line cards to the EX9200 Switch Fabric modules via a unique pass-through connector system that provides unparalleled signal quality for future generations of fabric ASICs.”). For further example, the switch fabric ports are bi-directional links operative to communicate in both an upstream and a downstream direction, for example, they are designed to allow for full-duplex communication between the interface cards and the switch fabric. *See, e.g.*, EX9200 Ethernet Switch Datasheet (available at <https://www.juniper.net/content/dam/www/assets/datasheets/us/en/switches/ex9200-ethernet-switch-datasheet.pdf>) (“The EX9200 switch fabric is capable of delivering up to 480 Gbps (full duplex) per slot”). For further example, the switch fabric itself is composed of multiple interconnected ASICs (Application-Specific Integrated Circuits) that provide high-bandwidth packet forwarding and forwarding tables. *See, e.g.*, EX9200 Ethernet Switch Datasheet (available at <https://www.juniper.net/content/dam/www/assets/datasheets/us/en/switches/ex9200-ethernet-switch-datasheet.pdf>) (“Data plane signals pass directly from the EX9200 line cards to the EX9200 Switch Fabric modules via a unique pass-through connector system that provides unparalleled signal quality for future generations of fabric ASICs.”). For further example, on information and belief, the ASICs likewise are bi-directional links operative to communicate in both an upstream and a downstream direction, for example, they are designed to handle both inbound and outbound

traffic simultaneously. *See, e.g.,* EX9200 Ethernet Switch Datasheet (available at <https://www.juniper.net/content/dam/www/assets/datasheets/us/en/switches/ex9200-ethernet-switch-datasheet.pdf>) (“Data plane signals pass directly from the EX9200 line cards to the EX9200 Switch Fabric modules via a unique pass-through connector system that provides unparalleled signal quality for future generations of fabric ASICs.”).

45. The '740 Accused Products, including the Juniper EX9200, are used to receive a data frame having frame attributes sent between the communication network and the network node. For example, the EX9200 may receive a data frame, which upon receipt, is processed by the EX9200 ASICs to perform various operations, including parsing the frame attributes and performing forwarding decisions based on the information contained in the frame. For further example, the switch may also apply additional processing based on the frame attributes, such as queuing the frame for prioritized forwarding based on QoS markings. *See, e.g.,* Hashing algorithm for link aggregation groups (LAGs) on EX Series switches (available at https://supportportal.juniper.net/s/article/Hashing-algorithm-for-link-aggregation-groups-LAGs-on-EX-Series-switches?language=en_US) (“The LAG hashing algorithm on EX Series switches determines the member link to be used for an incoming frame/packet depending on a subset of the following values in the frame/packet header: Source MAC address, Destination MAC address, Source IP address, Destination IP address”).

46. The '740 Accused Products, including the Juniper EX9200, are used to select, in a single computation based on at least one of the frame attributes, a first physical link out of the first group and a second physical link out of the second group. For example, the Juniper EX9200 is used to select a first physical link, for example an Ethernet port, out of the first group, for example, to: (i) perform a hash-based load balancing algorithm to distribute traffic across link aggregation

groups (LAGs); (ii) compute a hash value based on various attributes of the incoming traffic, such as the source and destination IP addresses, port numbers, and protocol information; and (iii) utilize the resulting hash value to determine which link in the LAG or link set should be used for forwarding the traffic. *See, e.g.*, “Load Balancing for Aggregated Ethernet Interfaces” (available at <https://www.juniper.net/documentation/us/en/software/junos/interfaces-ethernet-switches/topics/topic-map/switches-interface-load-balancing.html>) (“By default, the hash key mechanism to load-balance frames across LAG interfaces is based on Layer 2 fields (such as frame source and destination address)”). The Juniper EX9200 is used further to select a second physical link out of the second group, for example, traffic arriving at an interface card is queued and forwarded to the switch fabric through one or more switch fabric ports, which are selected with a load balancing algorithm based on a hash function that takes into account various attributes of the traffic, *e.g.*, the source and destination MAC addresses, VLAN tags, and packet payload. *See, e.g.*, “EX9200 Ethernet Switch Datasheet” (available at <https://www.juniper.net/content/dam/www/assets/datasheets/us/en/switches/ex9200-ethernet-switch-datasheet.pdf>) (“Data plane signals pass directly from the EX9200 line cards to the EX9200 Switch Fabric modules via a unique pass-through connector system that provides unparalleled signal quality for future generations of fabric ASICs.”); *see also, e.g.*, “Hashing algorithm for link aggregation groups (LAGs) on EX Series switches” (available at https://supportportal.juniper.net/s/article/Hashing-algorithm-for-link-aggregation-groups-LAGs-on-EX-Series-switches?language=en_US) (“the LAG hashing algorithm on EX Series switches, which determines the member link to be used for an outgoing interface in an aggregated bundle”). On information and belief, the selection of both the first link from the first group and the second link in the second group are done in a single computation.

47. The '740 Accused Products, including the Juniper EX9200, are used to send the data frame over the selected first and second physical links. For example, the Juniper EX9200 is used to transmit data between a network node and a network (*see supra*) via a network module connected to the network node through a first group of links (*e.g.*, Ethernet ports) and to a switch fabric via a second group of links (*e.g.*, switch fabric ports); it is therefore used to send a data frame over the selected first and second physical links, as described *supra*. Moreover, as described *supra*, the sending comprises communicating along at least one of said bi-directional links, for example, as discussed *supra*, the links support full duplex communication.

48. With knowledge of the '740 Patent, Juniper has actively induced and continues to induce the direct infringement of one or more claims of the '740 Patent, including claim 1, in violation of 35 U.S.C. § 271(b) by its customers and/or end users of their products, including at least the '740 Accused Products, by selling products with a particular design, providing support for, providing instructions for use of, and/or otherwise encouraging its customers and/or end-users to directly infringe, either literally and/or under the doctrine of equivalents, one or more claims of the '740 Patent, including claim 1, with the intent to encourage those customers and/or end-users to infringe the '740 Patent.

49. By way of example, Juniper actively induces infringement of the '740 Patent by encouraging, instructing, and aiding one or more persons in the United States, including but not limited to customers and end users who purchase, test, operate, and use Juniper's products, including at least the '740 Accused Products, to make, use, sell, and/or offer to sell Juniper's products, including at least the '740 Accused Products, in a manner that infringes at least one claim of the '740 Patent, including claim 1.

50. As a result of Juniper's inducement of infringement, its customers and/or end users made, used, sold, offered for sale, or imported, and continue to make, use, sell, offer to sell, or import Juniper's products, including the '740 Accused Products, in ways that directly infringe one or more claims of the '740 Patent, including claim 1, such as in the manner described above with respect to the Juniper EX9200. Juniper had knowledge of its customers' and/or end users' direct infringement at least by virtue of its sales, instruction, and/or promotion of Juniper's products, including the '740 Accused Products, at least as of May 2017 when Orckit IP initiated discussions with Juniper about its patent portfolio, and no later than the filing of this Complaint.

51. Juniper has also contributed to and continues to contribute to the infringement by others, including its customers and/or the end users of its products, of at least claim 1 of the '740 Patent under 35 U.S.C. § 271(c) by, among other things, selling, offering for sale within the United States and/or importing into the United States or otherwise making available the '740 Accused Products for use in practicing the patented inventions of the '740 Patent, knowing that the '740 Accused Products are especially made or adapted for use in infringement of the '740 Patent, are used in practicing the method and process claims of the '740 Patent, embody a material part of the inventions claimed in the '740 Patent, and are not staple articles of commerce suitable for substantial non-infringing use. Juniper's customers and/or the end users of the '740 Accused Products directly infringe the '740 Patent by using the '740 Accused Products.

52. With knowledge of the '740 Patent, Juniper has willfully, deliberately, and intentionally infringed the '740 Patent, and continues to willfully, deliberately, and intentionally infringe the '740 Patent. Juniper had actual knowledge of the '740 Patent and Juniper's infringement of the '740 Patent as set forth above. After acquiring that knowledge, Juniper directly and indirectly infringed the '740 Patent as set forth above. Juniper knew or should have known

that its conduct amounted to infringement of the '740 Patent at least because Orckit IP notified Juniper of the '740 Patent and its infringement of the '740 Patent as set forth above.

53. Juniper will continue to infringe the '740 Patent unless and until it is enjoined by this Court. Juniper, by way of its infringing activities, has caused and continues to cause Orckit to suffer damages in an amount to be determined, and has caused and is causing Orckit irreparable harm. Orckit has no adequate remedy at law against Juniper's acts of infringement and, unless it is enjoined from its infringement of the '740 Patent, Orckit will continue to suffer irreparable harm.

54. Orckit is entitled to recover from Juniper damages at least in an amount adequate to compensate for its infringement of the '740 Patent, which amount has yet to be determined, together with interest and costs determined by the Court.

55. Orckit has complied with the requirements of 35 U.S.C. § 287 with respect to the '740 Patent.

COUNT TWO: INFRINGEMENT OF U.S. PATENT 8,830,821

56. Juniper directly infringes at least claim 14 of the '821 Patent by making, using, offering for sale, selling, and/or importing products, including at least the Accused Products, which include but are not limited to the products set forth in Appendix B ("the '821 Accused Products"), that meet every limitation, either literally or under the doctrine of equivalents, of at least claim 14 of the '821 Patent, in violation of 35 U.S.C. § 271(a).

57. The '821 Accused Products, including the MX304 Universal Routing Platform ("Juniper MX304"), which is exemplary of all of the '821 Accused Products, constitute systems for selecting entities within an MPLS network. *See, e.g.*, "MX304 Universal Routing Platform Datasheet" (available at [mx304-universal-routing-platform-datasheet.pdf \(juniper.net\)](https://www.juniper.net/press-releases/mx304-universal-routing-platform-datasheet.pdf)) ("In addition to basic L2/L3 VPN and virtual private LAN service (VPLS) support, the MX304 offers

enhanced VPN services such as quality-of-service (QoS)-prioritized VPN traffic for voice and video, L2 VPN internetworking to connect dissimilar L2 access networks, and rich IP/MPLS features to customize services and meet service-level agreements (SLAs”); *id.* (“The MX304 can be deployed as an IP/MPLS VPN edge router, VPLS router, MPLS label-switching router (LSR), or as a Layer 2 Ethernet switch or Layer 3 IP router”). For example, the ’821 Accused Products, including Juniper MX304, are MPLS networking platforms, *i.e.*, systems for selecting entities within an MPLS network.

58. The ’821 Accused Products, including Juniper MX304, comprise a data structure comprising a plurality of transport entity descriptors and an entity protection switch configured to switch between a working entity and a protection entity. *See, e.g.*, “Junos® OS MPLS Application User Guide” (available at <https://www.juniper.net/documentation/us/en/software/junos/mpls/mpls.pdf>) at 355 (“Standby secondary paths—You can configure primary and secondary paths. You configure secondary paths with the standby statement. To activate traffic protection, you need to configure these standby paths only on the ingress router. If the primary path fails, the ingress router immediately reroutes traffic from the failed path to the standby path, thereby eliminating the need to calculate a new route and signal a new path.”); *id.* at 571 (“The Constrained Shortest Path First (CSPF) algorithm is an advanced form of the shortest-path-first (SPF) algorithm used in OSPF and IS-IS route computations. CSPF is used in computing paths for LSPs that are subject to multiple constraints. When computing paths for LSPs, CSPF considers not only the topology of the network, but also the attributes of the LSP and the links, and it attempts to minimize congestion by intelligently balancing the network load”). For example, the ’821 Accused Products, including Juniper MX304, include label-switched paths (“LSPs”) that employ constrained shortest-path first (“CSPF”)

protocols that include primary and secondary paths, *i.e.*, they comprise a data structure comprising a plurality of transport entity descriptors.

59. The '821 Accused Products, including Juniper MX304, comprise digital logic configured to select said working entity and said protection entity from said plurality of transport entity descriptors, comprising: logic configured to determine a probability of concurrent failure of said working entity and said protection entity. *See, e.g., id.* at 271 (“An SRLG is represented by a 32-bit number unique within an IGP (OSPFv2 and IS-IS) domain. A link might belong to multiple SRLGs. The SRLG of a path in a label-switched path (LSP) is the set of SRLGs for all the links in the path. When computing the secondary path for an LSP, it is preferable to find a path such that the secondary and primary paths do not have any links in common in case the SRLGs for the primary and secondary paths are disjoint. This ensures that a single point of failure on a particular link does not bring down both the primary and secondary paths in the LSP.”). For example, the '821 Accused Products, including Juniper MX304, detect failures in the paths between nodes, *i.e.*, they comprise digital logic configured to select said working entity and said protection entity from said plurality of transport entity descriptors, comprising: logic configured to determine a probability of concurrent failure of said working entity and said protection entity.

60. The '821 Accused Products, including Juniper MX304, comprise logic configured to determine an entity cost of said plurality of transport entity descriptors. *See, e.g., id.* at 571 (“The Constrained Shortest Path First (CSPF) algorithm is an advanced form of the shortest-path-first (SPF) algorithm used in OSPF and IS-IS route computations. CSPF is used in computing paths for LSPs that are subject to multiple constraints. When computing paths for LSPs, CSPF considers not only the topology of the network, but also the attributes of the LSP and the links, and it attempts to minimize congestion by intelligently balancing the network load”). For example,

the '821 Accused Products, including Juniper MX304, determine entity costs of the entities, such as traffic engineering (“TE”) and bandwidth data, *i.e.*, they comprise logic configured to determine an entity cost of said plurality of transport entity descriptors.

61. The '821 Accused Products, including Juniper MX304, comprise logic configured to reselect said working entity and said protection entity from said plurality of transport entity descriptors upon a reselection event. *See, e.g., id.* at 1620 (“Starting in Junos OS Release 22.4R1, you can distribute the traffic engineering (TE) policies that originate from the segment routing protocol to the traffic engineering database (TED) and into the BGP link-state as routes. BGP link-state collects the information related to the TE policies, so that the external controllers can perform actions such as path-computation, re-optimization, and network visualization within and across domains”); *id.* at 2019 (“A stateful PCE provides the following functions ... Triggers LSP re-route when there is a need to re-optimize the network”). For example, the '821 Accused Products, including Juniper MX304, reoptimizes LSPs when necessary to align the LSP with network traffic, *i.e.*, they comprise logic configured to reselect said working entity and said protection entity from said plurality of transport entity descriptors upon a reselection event.

62. The '821 Accused Products, including Juniper MX304, comprise said reselection event being selected from a group consisting of adding an entity to said plurality of transport entities, removing an entity from said plurality of transport entities, an operational status change for one of said plurality of transport entities, and a change in overall cost for one of said plurality of transport entities. *See, e.g., id.* For example, the '821 Accused Products, including Juniper MX304, reoptimizes LSPs when necessary to align the LSP with network traffic, including when an operational status change or overall cost change occurs, *i.e.*, said reselection event is selected from a group consisting of adding an entity to said plurality of transport entities, removing an

entity from said plurality of transport entities, an operational status change for one of said plurality of transport entities, and a change in overall cost for one of said plurality of transport entities.

63. With knowledge of the '821 Patent, Juniper has actively induced and continues to induce the direct infringement of one or more claims of the '821 Patent, including claim 14, in violation of 35 U.S.C. § 271(b) by its customers and/or end users of their products, including at least the '821 Accused Products, by selling products with a particular design, providing support for, providing instructions for use of, and/or otherwise encouraging its customers and/or end-users to directly infringe, either literally and/or under the doctrine of equivalents, one or more claims of the '821 Patent, including claim 14, with the intent to encourage those customers and/or end-users to infringe the '821 Patent.

64. By way of example, Juniper actively induces infringement of the '821 Patent by encouraging, instructing, and aiding one or more persons in the United States, including but not limited to customers and end users who purchase, test, operate, and use Juniper's products, including at least the '821 Accused Products, to make, use, sell, and/or offer to sell Juniper's products, including at least the '821 Accused Products, in a manner that infringes at least one claim of the '821 Patent, including claim 14.

65. As a result of Juniper's inducement of infringement, its customers and/or end users made, used, sold, offered for sale, or imported, and continue to make, use, sell, offer to sell, or import Juniper's products, including the '821 Accused Products, in ways that directly infringe one or more claims of the '821 Patent, including claim 14, such as in the manner described above with respect to the. Juniper had knowledge of its customers' and/or end users' direct infringement at least by virtue of its sales, instruction, and/or promotion of Juniper's products, including the '821

Accused Products, at least as of May 2017 when Orckit IP initiated discussions with Juniper about its patent portfolio, and no later than the filing of this Complaint.

66. Juniper has also contributed to and continues to contribute to the infringement by others, including its customers and/or the end users of its products, of at least claim 14 of the '821 Patent under 35 U.S.C. § 271(c) by, among other things, selling, offering for sale within the United States and/or importing into the United States or otherwise making available the '821 Accused Products for use in practicing the patented inventions of the '821 Patent, knowing that the '821 Accused Products are especially made or adapted for use in infringement of the '821 Patent, are used in practicing the method and process claims of the '821 Patent, embody a material part of the inventions claimed in the '821 Patent, and are not staple articles of commerce suitable for substantial non-infringing use. Juniper's customers and/or the end users of the '821 Accused Products directly infringe the '821 Patent by using the '821 Accused Products.

67. With knowledge of the '821 Patent, Juniper has willfully, deliberately, and intentionally infringed the '821 Patent, and continues to willfully, deliberately, and intentionally infringe the '821 Patent. Juniper had actual knowledge of the '821 Patent and Juniper's infringement of the '821 Patent as set forth above. After acquiring that knowledge, Juniper directly and indirectly infringed the '821 Patent as set forth above. Juniper knew or should have known that its conduct amounted to infringement of the '821 Patent at least because Orckit IP notified Juniper of the '821 Patent and its infringement of the '821 Patent as set forth above.

68. Juniper will continue to infringe the '821 Patent unless and until it is enjoined by this Court. Juniper, by way of its infringing activities, has caused and continues to cause Orckit to suffer damages in an amount to be determined, and has caused and is causing Orckit irreparable

harm. Orckit has no adequate remedy at law against Juniper's acts of infringement and, unless it is enjoined from its infringement of the '821 Patent, Orckit will continue to suffer irreparable harm.

69. Orckit is entitled to recover from Juniper damages at least in an amount adequate to compensate for its infringement of the '821 Patent, which amount has yet to be determined, together with interest and costs determined by the Court.

70. Orckit has complied with the requirements of 35 U.S.C. § 287 with respect to the '821 Patent.

COUNT THREE: INFRINGEMENT OF U.S. PATENT 10,652,111

71. Juniper directly infringes at least claim 1 of the '111 Patent by using the Accused Products, which include but are not limited to the products set forth in Appendix C ("the '111 Accused Products"), in a manner that meets every limitation, either literally or under the doctrine of equivalents, of at least claim 1 of the '111 Patent, in violation of 35 U.S.C. § 271(a). For example, Juniper directly infringes at least claim 1 of the '111 Patent, including by its own use of the '111 Accused Products in the infringing manner set forth below.

72. The '111 Accused Products are designed and operate in such manner that Juniper's customers and/or end users of the Accused Products directly infringe every element of at least claim 1 of the '111 Patent when they follow the instructions described in various materials with which Juniper induces its users to use the Accused Products. Induced by Juniper's sale of the '111 Accused Products, its promotion and advertising of them for their intended infringing use, its instructions on their use in the infringing manner, and other inducing activities, Juniper's customers and/or the end users of the Accused Products directly infringe through that use at least claim 1 of the '111 Patent by using the '111 Accused Products in a manner that practices every element of at least claim 1 of the '111 Patent.

73. For example, Juniper induces its customers and/or end users of its products to use the '111 Accused Products, including the Juniper MX304, which is exemplary of all of the '111 Accused Products, to practice a method for use with a packet network including a network node for transporting packets between first and second entities under control of a controller that is external to the network node. *See, e.g.*, “MX304 Universal Routing Platform Datasheet” (available at [mx304-universal-routing-platform-datasheet.pdf \(juniper.net\)](https://www.juniper.net/content/dam/www/assets/datasheets/us/en/sdn-management-operations/cloud-native-contrail-networking-datasheet.pdf)):

- **Universal SDN Gateway:** The MX Series offers a comprehensive solution for interconnecting virtual and physical networks—as well as between virtual networks operating with different technologies—via support for Multiprotocol BGP (MBGP), dynamic tunnels using MPLSoGRE or Virtual Extensible LAN (VXLAN) encapsulation, virtual routing and forwarding (VRF) tables, E-VPNs, and Network Configuration Protocol (NETCONF), along with the ability to send traffic between VRF and global routing tables based on configuration and policy.

Application Aware Networking

MX Series platforms use deep packet inspection to detect applications, and they consult with user-defined policies to determine traffic treatment on a per-application basis, enabling highly customized and differentiated services at scale. Working in conjunction with [Juniper Networks Contrail® Cloud Platform](https://www.juniper.net/content/dam/www/assets/datasheets/us/en/sdn-management-operations/cloud-native-contrail-networking-datasheet.pdf)™, MX Series routers can also steer into complex service chains and stream granular data to analytics engines and back-office systems to permit real-time charging and end-user engagement at the application and content level.

See also “Cloud-Native Contrail Networking Datasheet” (available at <https://www.juniper.net/content/dam/www/assets/datasheets/us/en/sdn-management-operations/cloud-native-contrail-networking-datasheet.pdf>) at 2:

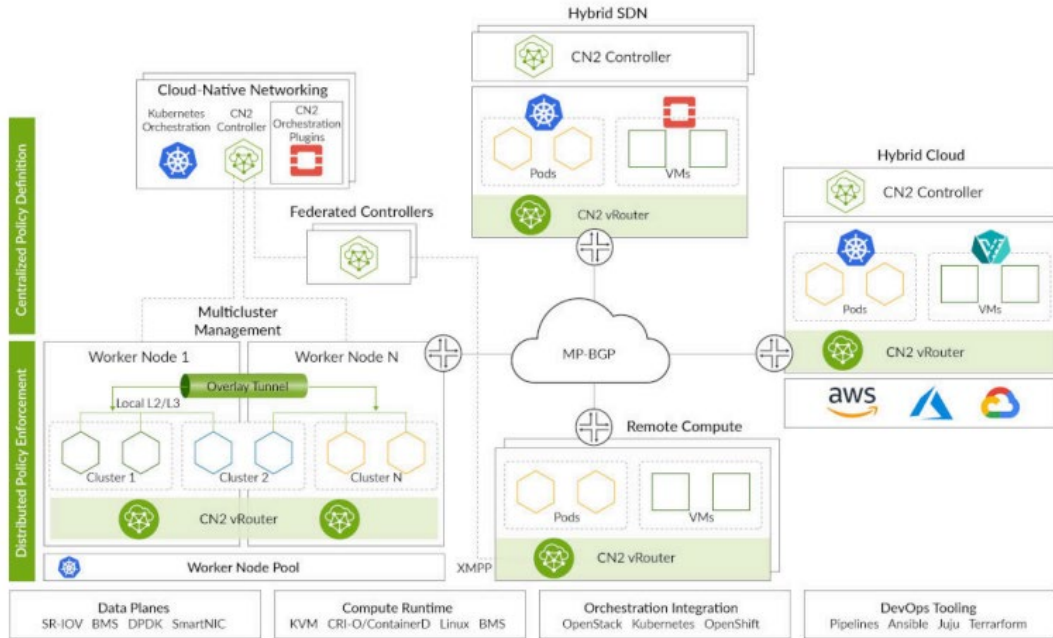


Figure 1: CN2 supports distributed policy enforcement with centralized policy definition.

For example, the '111 Accused Products, including the Juniper MX304, employ a CN2 (Juniper Cloud-Native Contrail Networking) Controller to control a number of entities that communicate data packets over a network, *i.e.*, they are used by an end user to perform method for use with a packet network including a network node for transporting packets between first and second entities under control of a controller that is external to the network node.

74. Juniper induces its customers and/or end users of its products to use the '111 Accused Products, including the Juniper MX304, in such manner as to (i) send, by the controller to the network node over the packet network, an instruction and a packet-applicable criterion, (ii) receive, by the network node from the controller, the instruction and the criterion, and (iii) receive, by the network node from the first entity over the packet network, a packet addressed to the second entity. See, e.g., “Contrail Networking Architecture Guide” (available at https://www.juniper.net/documentation/en_US/release-independent/solutions/information-products/pathway-pages/sg-010-contrail-networking-arch-guide.pdf) at 7:

Contrail Networking Working with An Orchestrator

Contrail Networking consists of two primary pieces of software:

- *Contrail Networking Controller* – a set of software services that maintains a model of networks and network policies, typically running on several servers for high availability
- *Contrail Networking vRouter* – installed in each virtualized host to enforce network and security policies, and to perform packet forwarding

For example, the '111 Accused Products, including the Juniper MX304, execute “network policies” that constitute the claimed instruction and packet-applicable criteria and send them by the controller to the network node, *i.e.*, they are used by an end user for (i) sending by the controller to the network node over the packet network, an instruction and a packet-applicable criterion, (ii) receiving, by the network node from the controller, the instruction and the criterion; and (iii) receiving, by the network node from the first entity over the packet network, a packet addressed to the second entity.

75. Juniper induces its customers and/or end users of its products to use the '111 Accused Products, including the Juniper MX304, in such manner as to check, by the network node, if the packet satisfies the criterion. *See, e.g.*, “Contrail Architecture” (available at <https://www.juniper.net/content/dam/www/assets/white-papers/us/en/contrail-architecture.pdf>) at

23:

Forwarding Policies

The vRouter forwarding plane contains a flow table for multiple different functionality—firewall policies, load balancing, statistics, etc. The flow table contains flow entries that have a match criteria and associated actions. The match criteria can be a N-tuple match on received packets (wildcard fields are possible). The actions include dropping the packet, allowing the packet, or redirecting it to another routing instance. The vRouter agent programs the flow entries in the forwarding plane.

For example, the '111 Accused Products, including the Juniper MX304, examines data packets pursuant to the “forwarding policies,” *i.e.* they are used by an end user for checking, by the network node, if the packet satisfies the criterion.

76. Juniper induces its customers and/or the end users of its products to use the '111 Accused Products, including the Juniper MX304, such that responsive to the packet not satisfying the criterion, send, by the network node over the packet network, the packet to the second entity. *See, e.g., id.* For example, the '111 Accused Products, including the Juniper MX304, direct packets to the designated destination if they do not satisfy the “forwarding policies,” *i.e.*, they are used by an end user for, responsive to the packet not satisfying the criterion, sending, by the network node over the packet network, the packet to the second entity.

77. Juniper induces its customers and/or the end users of its products to use the '111 Accused Products, including the Juniper MX304, such that responsive to the packet satisfying the criterion, send the packet, by the network node over the packet network, to an entity that is included in the instruction and is other than the second entity. *See, e.g., id.* For example, the '111 Accused Products, including the Juniper MX304, drop or redirect the packets if they satisfy the “forwarding policies,” *i.e.*, they are used by an end user for, responsive to the packet satisfying the criterion, sending the packet, by the network node over the packet network, to an entity that is included in the instruction and is other than the second entity.

78. With knowledge of the '111 Patent, Juniper has actively induced and continues to induce the direct infringement of one or more claims of the '111 Patent, including claim 1, in violation of 35 U.S.C. § 271(b) by its customers and/or end users of its products, including at least the '111 Accused Products, by selling products with a particular design, providing support for, providing instructions for use of, and/or otherwise encouraging its customers and/or end-users to directly infringe, either literally and/or under the doctrine of equivalents, one or more claims of the '111 Patent, including claim 1, with the intent to encourage those customers and/or end-users to infringe the '111 Patent.

79. By way of example, Juniper knowingly and actively induced, aided, and abetted the direct infringement of the '111 Patent by encouraging, instructing, and aiding one or more persons in the United States, including but not limited to customers and end users who purchase, test, operate, and use Juniper's products, including at least the '111 Accused Products, to use Juniper's products, including at least the '111 Accused Products, in a manner that infringes at least one claim of the '111 Patent, including claim 1.

80. For example, Juniper updates and maintains a website with various materials addressed to end users of its products, including its customers, which instruct its customers on how to use the '111 Accused Products, which are designed in such manner as to infringe at least claim 1 of the '111 Patent when used in the manner shown in such materials. Said materials include, without limitation, quick-start guides, administration guides, user guides, operating instructions, blogs, white papers, data sheets, how-to videos, and other like materials, which cover in depth aspects of how to operate Juniper routers/switches and/or other products, including the '111 Accused Products, and instruct end users how to operate these products in a manner that infringes at least claim 1 of the '111 Patent. *See., e.g.* "Conrail Architecture" (available at <https://www.juniper.net/content/dam/www/assets/white-papers/us/en/conrail-architecture.pdf>); *see also., e.g.*, "Conrail Networking Architecture Guide" (available at https://www.juniper.net/documentation/en_US/release-independent/solutions/information-products/pathway-pages/sg-010-conrail-networking-arch-guide.pdf).

81. As a result of Juniper's inducement of infringement, its customers and/or end users used and continue to use Juniper's products, including the '111 Accused Products, in ways that directly infringe one or more claims of the '111 Patent, including claim 1, such as the ways described above with respect to the. Juniper had knowledge of its customers' and/or end users'

direct infringement at least by virtue of its design, sales, instruction, and/or otherwise promotion of Juniper's products, including '111 Accused Products, and no later than the filing of this Complaint.

82. Juniper has also contributed to and continues to contribute to the infringement by others, including its customers and/or the end users of its products, of at least claim 1 of the '111 Patent under 35 U.S.C. § 271(c) by, among other things, selling, offering for sale within the United States and/or importing into the United States or otherwise making available the '111 Accused Products for use in practicing the patented inventions of the '111 Patent, knowing that the '111 Accused Products are especially made or adapted for use in infringement of the '111 Patent, are used in practicing the method and process claims of the '111 Patent, embody a material part of the inventions claimed in the '111 Patent, and are not staple articles of commerce suitable for substantial non-infringing use. Juniper's customers and/or the end users of the '111 Accused Products directly infringe the '111 Patent by using the '111 Accused Products.

83. With knowledge of the '111 Patent, Juniper has willfully, deliberately, and intentionally infringed the '111 Patent, and continues to willfully, deliberately, and intentionally infringe the '111 Patent. Juniper had actual knowledge of the '111 Patent and Juniper's infringement of the '111 Patent as set forth above. After acquiring that knowledge, Juniper directly and indirectly infringed the '111 Patent as set forth above. Juniper knew or should have known that its conduct amounted to infringement of the '111 Patent.

84. Juniper will continue to infringe the '111 Patent unless and until it is enjoined by this Court. Juniper, by way of its infringing activities, has caused and continues to cause Orckit to suffer damages in an amount to be determined, and has caused and is causing Orckit irreparable

harm. Orckit has no adequate remedy at law against Juniper's acts of infringement and, unless it is enjoined from its infringement of the '111 Patent, Orckit will continue to suffer irreparable harm.

85. Orckit is entitled to recover from Juniper damages at least in an amount adequate to compensate for its infringement of the '111 Patent, which amount has yet to be determined, together with interest and costs determined by the Court.

86. Orckit has complied with the requirements of 35 U.S.C. § 287 with respect to the '111 Patent.

DEMAND FOR JURY TRIAL

Pursuant to Rule 38 of the Federal Rules of Civil Procedure, Orckit hereby demands a jury trial on all issues triable to a jury.

PRAYER FOR RELIEF

WHEREFORE, Plaintiff respectfully prays for entry of judgment for Orckit and against Juniper and enter the following relief:

a) A judgment that Juniper has infringed and continues to infringe (directly and/or indirectly) one or more claims of the Asserted Patents, namely U.S. Patents Nos. 7,545,740 ("the '740 Patent"), 8,830,821 ("the '821 Patent"), and 10,652,111 ("the '111 Patent").

b) That Orckit recover all damages to which it is entitled under 35 U.S.C. § 284, but in no event less than a reasonable royalty;

c) That Juniper be permanently enjoined from further infringement of the Asserted Patents;

d) That Orckit, as the prevailing party, shall recover from Juniper all taxable costs of court;

- e) That Orckit shall recover from Juniper all pre- and post-judgment interest on the damages award, calculated at the highest interest rates allowed by law;
- f) That Orckit shall recover from Juniper an ongoing royalty in an amount to be determined for continued infringement after the date of judgment; and
- g) That Juniper's conduct was willful and that Orckit should therefore recover treble damages, including attorneys' fees, expenses, and costs incurred in this action, and an increase in the damage award pursuant to 35 U.S.C. § 284;
- h) That this case is exceptional and that Orckit shall therefore recover its attorneys' fees and other recoverable expenses, under 35 U.S.C. § 285; and
- i) That Orckit shall recover from Juniper such other and further relief as the Court deems appropriate.

Dated: July 28, 2023

Respectfully submitted,

/s/ Jacob R. Kirkham

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