

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE**

Assurant, Inc.,

Plaintiff,

v.

Intellectual Ventures I LLC, Intellectual
Ventures II LLC, and Callahan Cellular
L.L.C.,

Defendants.

C.A. No. _____

JURY TRIAL DEMANDED

COMPLAINT FOR DECLARATORY JUDGMENT

Plaintiff Assurant, Inc. (“Assurant”) brings this Complaint for Declaratory Judgment against Defendants Intellectual Ventures I LLC, Intellectual Ventures II LLC, and Callahan Cellular L.L.C. (collectively, “IV”) based on IV’s unjustified and unfounded allegations that Assurant’s operations directly and/or indirectly infringe certain patents purportedly held by IV. Assurant alleges as follows:

NATURE OF THE ACTION

1. This is an action under the patent laws of the United States, Title 35, United States Code, seeking a declaratory judgment against IV based on its accusations that Assurant infringes certain of its patents, including U.S. Patent Nos. 10,567,391 (“the ’391 Patent”), 8,332,844 (“the ’844 Patent”), 7,314,167 (“the ’167 Patent”), 7,949,785 (“the ’785 Patent”), and 7,712,080 (“the ’080 Patent”) (collectively, the “DJ Patents”), as set forth in Counts I-V, below.

2. On information and belief, Callahan Cellular L.L.C. is the assignee of the ’391 Patent.

3. On information and belief, Callahan Cellular L.L.C. possesses all rights, including enforcement, in the ’391 Patent.

4. On information and belief, Intellectual Ventures II LLC is the assignee of the '844 Patent and the '167 Patent.

5. On information and belief, Intellectual Ventures II LLC possess all rights, including enforcement, in the '844 Patent and the '167 Patent.

6. On information and belief, Intellectual Ventures I LLC is the assignee of the '785 Patent and the '080 Patent.

7. On information and belief, Intellectual Ventures I LLC possess all rights, including enforcement, in the '785 Patent and the '080 Patent.

THE PARTIES

8. On information and belief, Defendant Intellectual Ventures I LLC ("IV I") is a Delaware limited liability company, with its principal place of business located at 3150 139th Avenue SE, Bellevue, Washington 98005.

9. On information and belief, Defendant Intellectual Ventures II LLC ("IV II") is a Delaware limited liability company, with its principal place of business located at 3150 139th Avenue SE, Bellevue, Washington 98005.

10. On information and belief, Defendant Callahan Cellular L.L.C. ("Callahan") is a Delaware limited liability company, with its principal place of business located at 2711 Centerville Road, Suite 400 Wilmington, Delaware 19808.

11. On information and belief, IV I, IV II, and Callahan have conspired to monetize the DJ patents, including but not limited to licensing the DJ Patents and/or engaging in litigation related to the DJ Patents.

12. On information and belief, IV I, IV II, and Callahan are owned and/or operated by a common entity, or are otherwise under common control.

13. On information and belief, Callahan has assigned hundreds of patents to IV I, IV II, and related entities.

14. On information and belief, many of the patents assigned by Callahan to IV I, IV II, or related entities have been subsequently asserted in litigation by IV I, IV II, and/or related entities.

15. By way of example, Callahan assigned U.S. Patent Nos. 7,016,963, 9,092,546 and 9,686,378 to IV II on September 18, 2018.

16. As part of the assignment, the same individual (Tracy Lemke) signed on behalf of both Callahan (as an Authorized Person) and IV II (as the Assistant Company Secretary).

17. Subsequently, IV II asserted each patent against VMware Inc. in the Western District of Texas. *See* Case Nos. 6-20-cv-00220, -00457.

18. As another example, Callahan assigned U.S. RE 42,153 to IV II on May 6, 2016.

19. As part of the assignment, Tracy Lemke signed on behalf of Callahan as an Authorized Person.

20. As alleged above, Tracy Lemke was the Assistant Company Secretary of IV II at the time of the assignment.

21. Subsequently, IV II asserted U.S. RE 42,153 against Arista Networks, Inc. and Hewlett Packard Enterprise Company in the Western District of Texas. *See* Case Nos. 6-20-cv-00749, 6-21-cv-00226.

22. As another example, Callahan assigned U.S. Patent No. 7,199,715 to IV II on August 4, 2016.

23. As part of the assignment, the same individual (Tracy Lemke) signed on behalf of both Callahan and IV II as an Authorized Person of both parties.

24. Subsequently, IV II asserted U.S. Patent No. 7,199,715 against FedEx Corporation in the Eastern District of Texas. *See* Case No. 2-16-cv-00980.

25. As another example, Callahan assigned U.S. Patent No. 6,782,370 to IV II on Feb. 15, 2016.

26. As part of the assignment, Tracy Lemke signed on behalf of Callahan as an Authorized Person.

27. As alleged above, Tracy Lemke was the Assistant Company Secretary of IV II at the time of the assignment.

28. Subsequently, IV II asserted U.S. Patent No. 6,782,370 against J Crew Group, Inc. and FTD Companies, Inc. in the Eastern District of Texas. *See* Case Nos. 6-16-cv-00195, -00196.

29. Assurant is a domestic corporation organized under the laws of the state of Delaware, with its principal place of business located at 260 Interstate N Cir SE, Atlanta, GA 30339.

30. Assurant is a leading global provider of comprehensive risk management solutions for the auto, lifestyle, and housing protection sectors. Assurant also helps businesses manage the risk of property damage, liability, and financial loss, theft, and natural disasters.

JURISDICTION AND VENUE

31. Assurant repeats the allegations in the preceding paragraphs as if fully set forth herein.

32. This Declaratory Judgment Complaint includes counts for declaratory relief under the patent laws of the United States, 35 U.S.C. §§ 1, *et seq.*

33. Pursuant to the Declaratory Judgment Act, 28 U.S.C. §§ 2201 and 2202, Assurant seeks a declaration from the Court that Assurant does not infringe the DJ Patents, described in the following paragraphs.

34. This Court has subject matter jurisdiction over the claims alleged in this action under 28 U.S.C. §§ 1331, 1338, 2201, and 2202 because this Court has exclusive jurisdiction over declaratory judgment claims arising under the patent laws of the United States pursuant to 28 U.S.C. §§ 1331, 1338, 2201, and 2202.

35. This Court can provide the declaratory relief sought in this Declaratory Judgment Complaint because an actual case and controversy exists between the parties within the scope of this Court's jurisdiction pursuant to 28 U.S.C. § 2201.

36. An actual case and controversy exists because IV has accused Assurant of infringing the DJ Patents and indicated its intention to take the steps necessary to protect its intellectual property rights. As discussed below, Assurant does not infringe and has not infringed the DJ Patents; and therefore, Assurant has the right to engage in the complained-of activity, to the extent it even conducts the complained-of activity at all, much less in the United States.

37. IV's actions have created a real, immediate, and justiciable dispute between Assurant and IV as to whether Assurant's operations infringe the DJ Patents.

38. IV's actions include threatening emails that Assurant is purportedly required to license the DJ Patents, specific allegations that Assurant infringes each of the DJ Patents, representations that IV intends to pursue future litigation against companies who do not license its patent portfolio, IV's warning that "if you plan to take a license, you do so sooner than later," and the history of litigation by IV against other entities it claims are in similar positions as Assurant.

39. On Wednesday, January 3, 2024, Steve Joroff contacted Assurant on behalf of IV to "initiate a dialogue concerning intellectual property and licensing matters with Assurant." A reproduction of that January 3, 2024, email from Mr. Joroff is depicted below. As the Vice

President of Licensing at IV, all of Mr. Joroff's communications to Assurant were on behalf of IV, and he was authorized to make those statements on IV's behalf.

From: Steve Joroff <sjoroff@intven.com>
Sent: Wednesday, January 3, 2024 3:56 PM
To: sheila.garber@assurant.com <sheila.garber@assurant.com>
Cc: alyssa.cassada@assurant.com <alyssa.cassada@assurant.com>
Subject: Exploring Intellectual Property Licensing Opportunities - between Intellectual Ventures and Assurant

Dear Ms. Garber,

Allow me to introduce myself; I am Steve Joroff, the Vice President of Licensing at Intellectual Ventures (IV). At IV, I lead a dedicated team responsible for negotiating patent license agreements, particularly within the realm of banking, insurance, and financial services.

I am reaching out to initiate a dialogue concerning intellectual property and licensing matters with Assurant. Exploring the potential synergy between IV's extensive worldwide patent portfolio and Assurant's endeavors could prove mutually advantageous. I propose that our initial discussion cover an overview of IV's expansive patent portfolio and its relevance to Assurant's operations. Subsequently, both parties can collaboratively determine the direction of patent license discussions.

For context, Intellectual Ventures stands as a pioneer in patent aggregation, licensing, and sales. Over the past two decades, we've invested billions in acquiring, maintaining, and licensing patents. Presently, our portfolio boasts over 7,000 active patents procured from esteemed companies, research institutions, and inventors. Notably, these patents cover some of the technology integral to Assurant's daily operations, including cloud computing, networking, security, storage, digital payments, and utilization of open-source software, among others.

I eagerly await your response and the proposal of suitable dates and times for our inaugural discussion. I believe our collaboration holds the potential for substantial mutual benefit and innovation.

Thank you for your attention, and I look forward to our imminent interaction.

Best,

Steve Joroff
Vice President, Licensing
Intellectual Ventures
E - sjoroff@intven.com
M - 732.995.0230
O - 425.247.2280
Schedule a meeting: <https://calendly.com/intellectualventures/30min>

40. Mr. Joroff, on behalf of IV, indicated an intent to “cover an overview of IV’s expansive patent portfolio and its relevance to Assurant’s operations” in order to “determine the direction of patent license discussion.” Mr. Joroff acknowledged that IV’s business is in “patent aggregation, licensing, and sales.”

41. Mr. Joroff, on behalf of IV, specifically alleged that IV’s “patents cover some of the technology integral to Assurant’s daily operations, including cloud computing, networking, security, storage, digital payments, and utilization of open-source software, among others.” He also claimed that future interaction was “imminent.”

42. Indeed, on January 12, 2024, Mr. Joroff, on behalf of IV, sent a second email to address the “pressing need for a patent license agreement with Assurant.” Mr. Joroff’s January 12, 2024, email is depicted below.

From: Steve Joroff <sjoroff@intven.com>
Sent: Friday, January 12, 2024 9:34 AM
To: Sheila Garber <sheila.garber@assurant.com>
Cc: Alyssa Cassada <alyssa.cassada@assurant.com>
Subject: Urgent: Assurant & Intellectual Ventures Financial Services Licensing Program Discussion

Dear Ms. Garber,

I trust this message finds you well.

I am following up on my previous communication regarding the Intellectual Ventures (IV) Financial Services Patent Licensing Program. As the Vice President of Licensing at IV, we must address the pressing need for a patent license agreement with Assurant.

Our comprehensive program extends to all financial services companies, ensuring fair and impartial financial terms based on each company's U.S. revenue. I want to emphasize that this is not a selective initiative; all companies within the financial services sector are being presented with these terms.

The license terms will be shared with Assurant in advance of any introductory meeting. This is not an offer that can be refused; rather, it is a crucial step to ensure compliance with IV's patent portfolio.

I understand the importance of protecting Assurant's operations and intellectual property rights, and I am committed to facilitating a seamless process. The program is not designed to single out Assurant; instead, it offers an opportunity for the efficient acquisition of rights to our patented technologies.

I request your prompt attention to this matter, and I am available to discuss the license terms in detail at your earliest convenience. Let us work together to secure a licensing agreement that safeguards both Assurant's interests and IV's intellectual property rights.

Thank you for your immediate consideration.

Best,

Steve Joroff
Vice President, Licensing
Intellectual Ventures
E - sjoroff@intven.com
M - 732.995.0230
O - 425.247.2280
Schedule a meeting: <https://calendlv.com/intellectualventures/30min>

43. Mr. Joroff, on behalf of IV, stated that IV “must address the pressing need for a patent license agreement with Assurant” and that IV’s proposed license was “not an offer that can be refused; rather, it is a crucial step to ensure compliance with IV’s patent portfolio.”

44. Subsequently, IV sent Assurant a “Banking Tech Presentation” which identified software platforms allegedly used by Assurant, as well as specific claims of the DJ Patents that IV believes relate to and/or cover those platforms:

- The Docker platform, which IV believes practices at least Claim 7 of the ’844 Patent;
- The Kubernetes platform, which IV believes practices at least Claim 30 of the ’785 Patent;
- The Zelle® platform, which IV believes practices at least Claim 43 of the ’167 Patent; and
- The 3DSecure2 platform, which IV believes practices at least Claim 18 of the ’391 Patent.

45. On February 12, 2024 IV sent a presentation titled “IIF [(“Invention Investment Funds”)] Licensing Opportunity: Assurant” which alleged that the “IIF portfolio [has been] repeatedly validated in litigation” and indicated that “IIF has filed 160+ cases to date.”

46. The presentation further alleged that IV's "financial services" litigation campaign (which it considers Assurant to be a part of) is "active" and that IV's "litigation tends to be in multiple waves."

47. As part of the presentation, IV further identified "Assurant's Example use of OSS Applications" including use of "Apache Hadoop."

48. In the same presentation, IV further identified the '080 Patent as allegedly infringed by Assurant's purported use of Apache Hadoop.

49. On March 13, 2024, IV further circulated a draft license agreement with allegedly preferential terms. At that time, Mr. Joroff, on behalf of IV, stated that "The availability of an MFN [{"Most-Favored Nations clause"}] to financial services licensees will not be indefinite so I recommend that if you plan to take a license, you do so sooner than later."

50. IV has a history of aggressive litigation against other parties similarly situated to Assurant, including asserting the DJ Patents in patent litigation.

51. IV filed suit in the Eastern District of Texas on November 15, 2023, and alleged that JP Morgan Chase & Co.'s use of the Docker platform, the Zelle® platform, the Kubernetes platform infringes, *inter alia*, the '844, '167, and '785 Patents. *See Intellectual Ventures I LLC, et al. v. JP Morgan Chase & Co.*, No. 2:23-cv-523-JRG (E.D. Tex. Nov. 15, 2023), D.I. 1.

52. IV also in November 2023 alleged that Comerica Incorporated's use of the Docker platform and the Kubernetes platform infringes the '844 and '785 Patents. *See Intellectual Ventures I LLC, et al. v. Comerica Incorporated*, No. 2:23-cv-00524-JRG (E.D. Tex. Nov. 15, 2023), D.I. 1.

53. IV also in November 2023 alleged that Liberty Mutual Holding Company Inc. and its affiliates' use of the Docker platform and the Kubernetes platform infringes the '844 and '785

Patents. *See Intellectual Ventures I LLC, et al. v. Liberty Mutual Holding Company Inc. et al.*, No. 2:23-cv-00525-JRG (E.D. Tex. Nov. 15, 2023), D.I. 1.

54. This currently pending litigation demonstrates IV's pattern of practice: first asserting its patent rights via offers to "negotiate" licensing agreements and second, when it does not reach a license resolution, running to the Eastern District of Texas to sue its "prospective licensees."

55. For example, in its complaint against Comerica Incorporated, IV included a notice letter as an exhibit which was sent the day before the complaint was filed. *See Intellectual Ventures I LLC, et al. v. Comerica Incorporated*, No. 2:23-cv-00524-JRG (E.D. Tex. Nov. 15, 2023), D.I. 1, Ex. 5. Within the notice letter, IV emphasized that it "does not authorize Comerica or Comerica's customers or partners to practice any of these patents without a license." *Id.* Further, IV stated that it was "willing to offer a license to Comerica and remains open to business discussions with Comerica to negotiate such a license, either to the specifically referenced patents, or to all or a subset of the IV patent rights." *Id.*

56. IV included nearly identical notice letters in its complaints against JP Morgan Chase & Co. and Liberty Mutual Holding Company Inc. *See Intellectual Ventures I LLC, et al. v. JP Morgan Chase & Co.*, No. 2:23-cv-523-JRG (E.D. Tex. Nov. 15, 2023), D.I. 1, Ex. 7; *Intellectual Ventures I LLC, et al. v. Liberty Mutual Holding Company Inc. et al.*, No. 2:23-cv-00525-JRG (E.D. Tex. Nov. 15, 2023), D.I. 1, Ex. 5.

57. On information and belief, before those letters each of those defendants received similar correspondence from Mr. Joroff and/or another individual tasked with "licensing" IV's patent portfolio.

58. IV also sent Assurant an “Intellectual Ventures Financial Services Licensing Program” document, which indicated that IV (1) developed “pricing tiers” for a proposed license with Assurant that were based on “potential damages in litigation scenarios,” (2) was “engaging with all financial services and insurance companies operating in the United States,” and (3) “initiated patent litigations against JPMC, Liberty Mutual, and Comerica, *with further actions planned.*” (emphasis added).

59. Therefore, there is an actual case or controversy as to whether Assurant infringes the DJ patents considering that IV (1) specifically alleged there was a “pressing need” for Assurant to take a license as a “crucial step to ensure compliance with IV’s patent portfolio,” which was “not an offer that can be refused”; (2) identified accused technology, IV patents, and corresponding claims in IV’s “Banking Tech Presentation”; (3) referenced future litigation planned against companies who did not take a license in IV’s “Intellectual Ventures Financial Services Licensing Program Document”; and (4) has a historically aggressive litigation strategy, viewed in conjunction with January 2024 statements from Mr. Joroff where IV targeted Assurant, along with “all companies within the financial services sector,” presumably in connection with a second wave of lawsuits following the first wave against Liberty Mutual, Comerica, and JP Morgan Chase.

60. Taken together, IV has demonstrated a pattern of initiating litigation against companies who refuse to license the DJ patents. These facts show a substantial controversy between parties with adverse legal interests of sufficient immediacy and reality to warrant issuance of a declaratory judgment. Accordingly, this Court has declaratory judgment jurisdiction to hear this case.

61. On Friday, March 15, 2024, prior to filing the instant complaint, Assurant informed Intellectual Ventures that it (1) does not believe it infringes the DJ Patents, and (2) does not intend to take a license to the DJ Patents.

62. This Court has personal jurisdiction over Intellectual Ventures I LLC under the laws of this State and consistent with the underlying due process principles of the United States Constitution. Intellectual Ventures I LLC is subject to general personal jurisdiction in Delaware because it was formed under the laws of the State of Delaware.

63. Intellectual Ventures I LLC has also purposefully availed itself of this forum by bringing prior actions seeking to enforce its patent rights in Delaware. *See e.g., Intellectual Ventures I LLC v. Ubiquiti Inc.*, No. 1:23-cv-00865 (D. Del. Aug. 8, 2023), D.I. 1. On information and belief, Intellectual Ventures I LLC has entered into licensing agreements for the use of its patents in Delaware, and it has sent other cease and desist letters into the forum to other entities regarding these patents in Delaware.

64. This Court has personal jurisdiction over Intellectual Ventures II LLC under the laws of this State and consistent with the underlying due process principles of the United States Constitution. Intellectual Ventures II LLC is subject to general personal jurisdiction in Delaware because it was formed under the laws of the State of Delaware.

65. Intellectual Ventures II LLC has also purposefully availed itself of this forum by bringing prior actions seeking to enforce its patent rights in Delaware. *See e.g., Intellectual Ventures I LLC v. Ubiquiti Inc.*, No. 1:23-cv-00865 (D. Del. Aug. 8, 2023), D.I. 1. On information and belief, Intellectual Ventures II LLC has entered into licensing agreements for the use of its patents in Delaware, and it has sent other cease and desist letters into the forum to other entities regarding these patents in Delaware.

66. This Court has personal jurisdiction over Callahan Cellular L.L.C. under the laws of this State and consistent with the underlying due process principles of the United States Constitution. Callahan Cellular L.L.C. is subject to general personal jurisdiction in Delaware because it was formed under the laws of the State of Delaware.

67. Intellectual Ventures I LLC, Intellectual Ventures II LLC, and Callahan Cellular L.L.C. each reside in Delaware under 28 U.S.C. 1391(c)(2) as each was formed under the laws of the State of Delaware and is subject to personal jurisdiction in this district.

68. Venue is proper in this judicial district under 28 U.S.C. § 1391(b)(1) because all three defendants, Intellectual Ventures I LLC, Intellectual Ventures II LLC, and Callahan Cellular L.L.C., were organized under the laws of the State of Delaware and reside in this district and are residents of the State in which the district is located.

69. In addition, and alternatively, venue is proper in this judicial district under 28 U.S.C. § 1391(b)(2) because a substantial part of the events giving rise to this claim occurred in this district.

70. Alternatively, venue is proper under 28 U.S.C. § 1391(b)(3) because Intellectual Ventures I LLC, Intellectual Ventures II LLC, and Callahan Cellular L.L.C. are incorporated in this district and are therefore subject to personal jurisdiction in this district with respect to this action.

THE DECLARATORY JUDGMENT PATENTS

71. The '391 Patent is titled "Graduated Authentication in an Identity Management System" The '391 Patent was issued on February 18, 2020, with Dick C. Hardt as its only named inventor. On information and belief, the '391 Patent is current assigned to Callahan Cellular L.L.C. A true and correct copy of the '391 Patent is attached hereto as Exhibit 1.

72. The '844 Patent is titled "Root Image Caching and Indexing for Block-Level Distributed Application Management." The '844 Patent was issued on December 11, 2012, with Pradip Kulkarni, Mukul Kumar, Adhir Potdar, Richard Au, and Tung Nguyen as named inventors. The '844 Patent is currently assigned to Intellectual Ventures II LLC. A true and correct copy of the '844 Patent is attached hereto as Exhibit 2.

73. The '167 Patent is titled "Method and Apparatus for Providing Secure Identification, Verification and Authorization." The '167 Patent was issued on January 1, 2008, with Han Kiliccote as its only named inventor. The '167 Patent is currently assigned to Intellectual Ventures II LLC. A true and correct copy of the '167 Patent is attached hereto as Exhibit 3.

74. The '785 Patent is titled "Secure Virtual Community Network System." The '785 Patent was issued on May 24, 2011, with Hasan S. Alkhatib, Fouad A. Tobagi, and Farid F. Elwailly as its named inventors. The '785 Patent is current assigned to Intellectual Ventures I LLC. A true and correct copy of the '785 Patent is attached hereto as Exhibit 4.

75. The '080 Patent is titled "Systems and methods for parallel distributed programming." The '080 Patent was issued on May 4, 2010, with "Lei Pan, Lubomir R. Bic, and Michael B. Dillencourt as its named inventors. On information and belief, the '080 Patent is currently assigned to Intellectual Ventures I LLC, as alleged by IV in *Intellectual Ventures I LLC, et al. v. JP Morgan Chase & Co.*, No. 2:23-cv-523-JRG (E.D. Tex. Nov. 15, 2023), D.I. 1 ¶¶ 33-34. A true and correct copy of the '080 Patent is attached hereto as Exhibit 5.

**COUNT I: DECLARATORY JUDGMENT FOR NON-INFRINGEMENT
OF THE '391 PATENT**

76. Assurant repeats the allegations in the preceding paragraphs as if fully set forth herein.

77. IV has indicated that, absent license, it intends to enforce its intellectual property rights against Assurant. According to IV, there is a “pressing need” for Assurant to take a license as a “crucial step to ensure compliance with IV’s patent portfolio,” including the ’391 Patent.

78. IV has alleged that certain third-party software branded as “3DSecure2” (“the ’391 Accused System”) infringes one or more claim of the ’391 Patent.

79. As a result, there is an actual, justiciable, substantial, and immediate controversy between Assurant and IV regarding whether Assurant has infringed and/or continues to infringe the ’391 Patent.

80. Assurant does not make, use, offer to sell, or sell any product and/or system within the United States (including but not limited to the ’391 Accused System), or import into the United States any product and/or system (including but not limited to the ’391 Accused System) in a manner which infringes the ’391 Patent.

81. By way of example, each independent claim of the ’391 Patent requires, *inter alia*, that the accused system or method receive information about “**a first type of transaction**” and “**a second type of transaction**” wherein “the second type of transaction is **different from** the first type of transaction.”

82. On information and belief, and based by the representations made on 3dsecure2.com/frictionless-flow, the ’391 Accused System (1) “allows issues to approve **a transaction** without the need to interact with the cardholder” and (2) “will only require additional authentication if the risk is high.”

83. On information and belief, and based on the representations made on 3dsecure2.com/frictionless-flow, the ’391 Accused System provides for multiple authentication methods related to a single transaction, *not* for authentication of *two different* transactions.

84. In light of this representation, and on information and belief, the '391 Accused System does not include information about “a first type of transaction” and “a second type of transaction” wherein “the second type of transaction is different from the first type of transaction.” as recited by each independent claim of the '391 Patent.

85. As such, Assurant does not directly infringe the '391 Patent, either literally or under the doctrine of equivalents.

86. Likewise, at least because there is no direct infringement, Assurant does not induce infringement of the '391 Patent or otherwise contribute to infringement of the '391 Patent.

87. Pursuant to the Federal Declaratory Judgment Act, 28 U.S.C. § 2201 et seq., Assurant seeks a declaration that it (including but not limited to through its use of the '391 Accused System) does not infringe the '391 Patent.

**COUNT II: DECLARATORY JUDGMENT FOR NON-INFRINGEMENT
OF THE '844 PATENT**

88. Assurant repeats the allegations in the preceding paragraphs as if fully set forth herein.

89. IV has indicated that, absent license, it intends to enforce its intellectual property rights against Assurant. According to IV, there is a “pressing need” for Assurant to take a license as a “crucial step to ensure compliance with IV’s patent portfolio,” including the '844 Patent.

90. IV has alleged that certain third-party software branded as “Docker” (“the '844 Accused System”) infringes one or more claim of the '844 Patent.

91. As a result, there is an actual, justiciable, substantial, and immediate controversy between Assurant and IV regarding whether Assurant has infringed and/or continues to infringe the '844 Patent.

92. Assurant does not make, use, offer to sell, or sell any product and/or system within the United States (including but not limited to the '844 Accused System), or import into the United States any product and/or system (including but not limited to the '844 Accused System) in a manner which infringes the '844 Patent.

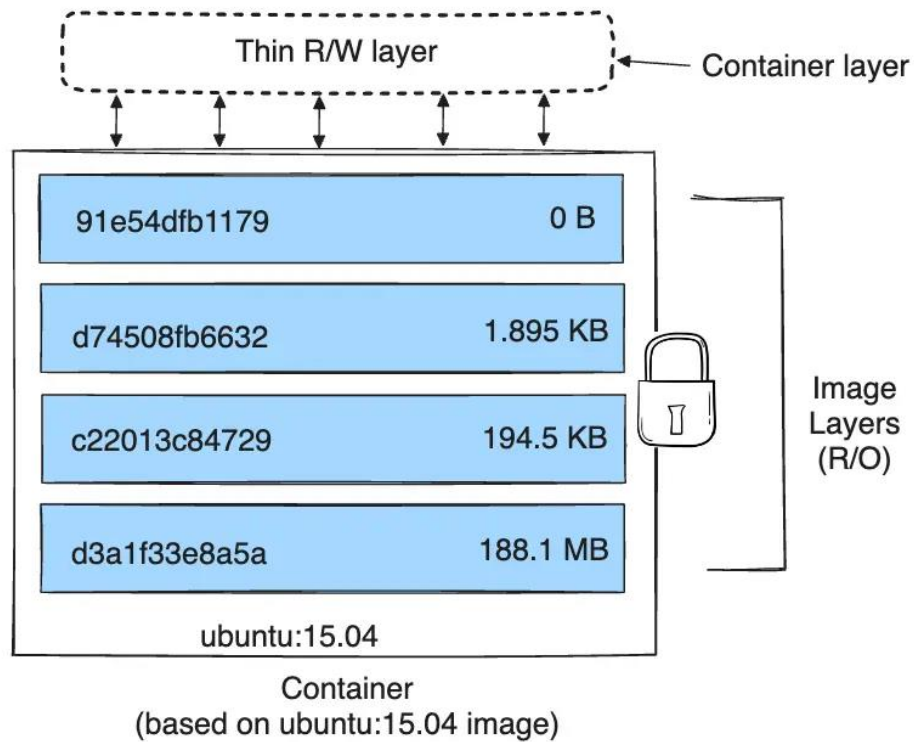
93. Each independent claim of the '844 Patent requires, *inter alia*, that the claimed “leaf image” contain “only additional data blocks not previously contained in said root image and changes made ... to the blocks of said root image.”

94. Assurant does not infringe the '844 Patent at least because the '844 Accused System does not include the claimed leaf image limitation.

95. The '844 Accused System includes an architecture with (1) “images” which are “read-only template[s] with instructions for creating a Docker container” and (2) “containers” which are “runnable instance[s] of an image” where each container “is defined by its image.” *See* <https://docs.docker.com/get-started/overview/#docker-architecture> (last accessed Mar. 15, 2024).

96. “The major difference between a container and an image is the top writable layer.” *See* <https://docs.docker.com/storage/storagedriver/> (last accessed Mar. 15, 2024).

97. On information and belief, a Docker container includes both (1) image layers and (2) a container layer, as depicted in the diagram below, which shows a container based on an ubuntu:15.04 image. *See* <https://docs.docker.com/storage/storagedriver/> (last accessed Mar. 15, 2024).



98. As depicted above, Docker represents that Docker containers include both (1) image layers and (2) a container layer.

99. In light of this representation, and on information and belief, Docker containers do not include “*only* additional data blocks not previously contained in said root image and changes made ... to the blocks of said root image” as recited by each independent claim of the ’844 Patent.

100. The ’844 Accused System does not include a “leaf image” as claimed by the ’844 Patent.

101. As such, Assurant does not directly infringe the ’844 Patent, either literally or under the doctrine of equivalents.

102. Likewise, at least because there is no direct infringement, Assurant does not induce infringement of the ’844 Patent or otherwise contribute to infringement of the ’844 Patent.

103. Pursuant to the Federal Declaratory Judgment Act, 28 U.S.C. § 2201 et seq., Assurant seeks a declaration that it (including but not limited to through its use of the '844 Accused System) does not infringe the '844 Patent.

**COUNT III: DECLARATORY JUDGMENT FOR NON-INFRINGEMENT
OF THE '167 PATENT**

104. Assurant repeats the allegations in the preceding paragraphs as if fully set forth herein.

105. IV has indicated that, absent license, it intends to enforce its intellectual property rights against Assurant. According to IV, there is a “pressing need” for Assurant to take a license as a “crucial step to ensure compliance with IV’s patent portfolio,” including the '167 Patent.

106. IV has alleged that certain third-party software branded as “Zelle®” (“the '167 Accused System”) infringes one or more claim of the '167 Patent.

107. As a result, there is an actual, justiciable, substantial, and immediate controversy between Assurant and IV regarding whether Assurant has infringed and/or continues to infringe the '167 Patent.

108. Assurant does not make, use, offer to sell, or sell any product and/or system within the United States (including but not limited to the '167 Accused System), or import into the United States any product and/or system (including but not limited to the '167 Accused System) in a manner which infringes the '167 Patent.

109. Specifically, Assurant does not make, use, offer to sell, or sell the '167 Accused System within the United States or import the '167 Accused System into the United States in any capacity.

110. As such, Assurant does not directly infringe the '167 Patent, either literally or under the doctrine of equivalents.

111. Likewise, at least because there is no direct infringement, Assurant does not induce infringement of the '167 Patent or otherwise contribute to infringement of the '167 Patent.

112. Pursuant to the Federal Declaratory Judgment Act, 28 U.S.C. § 2201 et seq., Assurant seeks a declaration that it (including but not limited to through its use of the '167 Accused System) does not infringe the '167 Patent.

**COUNT IV: DECLARATORY JUDGMENT FOR NON-INFRINGEMENT
OF THE '785 PATENT**

113. Assurant repeats the allegations in the preceding paragraphs as if fully set forth herein.

114. IV has indicated that, absent license, it intends to enforce its intellectual property rights against Assurant. According to IV, there is a “pressing need” for Assurant to take a license as a “crucial step to ensure compliance with IV’s patent portfolio,” including the '785 Patent.

115. IV has alleged that certain third-party software branded as “Kubernetes” (“the '785 Accused System”) infringes one or more claim of the '785 Patent.

116. As a result, there is an actual, justiciable, substantial, and immediate controversy between Assurant and IV regarding whether Assurant has infringed and/or continues to infringe the '785 Patent.

117. Assurant does not make, use, offer to sell, or sell any product and/or system within the United States (including but not limited to the '785 Accused System), or import into the United States any product and/or system (including but not limited to the '785 Accused System) in a manner which infringes the '785 Patent.

118. Each independent claim of the '785 Patent requires, *inter alia*, that a *device* is registered in a virtual network. *See* '785 Patent at Claim 1 (“the virtual network manager configured to register devices in a virtual network”); Claim 30 (“a memory and a processor to

implement a register module configured to register devices in a virtual network”); Claim 38 (“a first device that is registered as a member of the virtual network”); Claim 48 (“distributing a virtual network address to a device to register the device as a member of the virtual network”); Claim 62 (“distribute a virtual network address to a device to register the device as a member in the virtual network”); Claim 75 (“a user set of one or more devices that are registered in the virtual network”).

119. Assurant does not infringe the ’785 Patent (including, for example, the independent claims identified in the preceding paragraph) at least because the ’785 Accused System does not register *devices* in a virtual network.

120. The “kubernetes.io” website contains the following “overview” of the ’785 Accused System. See <https://kubernetes.io/docs/concepts/overview/> (last accessed Mar. 15, 2024).

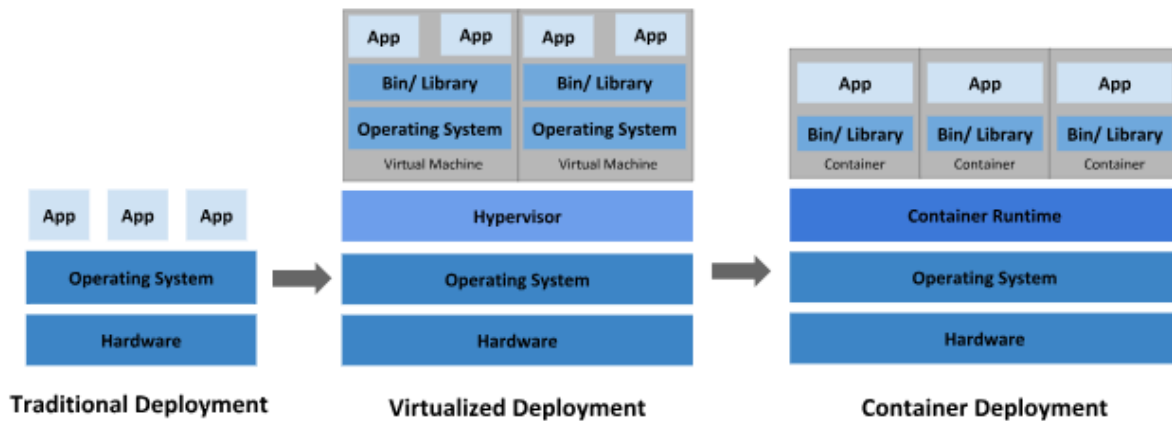
Overview

This page is an overview of Kubernetes.

Kubernetes is a portable, extensible, open source platform for managing containerized workloads and services, that facilitates both declarative configuration and automation. It has a large, rapidly growing ecosystem. Kubernetes services, support, and tools are widely available.

Going back in time

Let's take a look at why Kubernetes is so useful by going back in time.



Traditional deployment era: Early on, organizations ran applications on physical servers. There was no way to define resource boundaries for applications in a physical server, and this caused resource allocation issues. For example, if multiple applications run on a physical server, there can be instances where one application would take up most of the resources, and as a result, the other applications would underperform. A solution for this would be to run each application on a different physical server. But this did not scale as resources were underutilized, and it was expensive for organizations to maintain many physical servers.

Virtualized deployment era: As a solution, virtualization was introduced. It allows you to run multiple Virtual Machines (VMs) on a single physical server's CPU. Virtualization allows applications to be isolated between VMs and provides a level of security as the information of one application cannot be freely accessed by another application.

Virtualization allows better utilization of resources in a physical server and allows better scalability because an application can be added or updated easily, reduces hardware costs, and much more. With virtualization you can present a set of physical resources as a cluster of disposable virtual machines.

Each VM is a full machine running all the components, including its own operating system, on top of the virtualized hardware.

Container deployment era: Containers are similar to VMs, but they have relaxed isolation properties to share the Operating System (OS) among the applications. Therefore, containers are considered lightweight. Similar to a VM, a container has its own filesystem, share of CPU, memory, process space, and more. As they are decoupled from the underlying infrastructure, they are portable across clouds and OS distributions.

121. As stated above, the “kubernetes.io” website represents that the ’785 Accused System is an “open source platform for managing *containerized* workloads and services” wherein containers are “decoupled from the underlying infrastructure” and “are portable across clouds and OS distributions.” See <https://kubernetes.io/docs/concepts/overview/> (last accessed Mar. 15, 2024) (emphasis added).

122. The “kubernetes.io” website contains the following description of “Kubernetes Components” which make up the ’785 Accused System. See <https://kubernetes.io/docs/concepts/overview/components/> (last accessed Mar. 15, 2024).

Kubernetes Components

When you deploy Kubernetes, you get a cluster.

A Kubernetes cluster consists of a set of worker machines, called nodes, that run containerized applications. Every cluster has at least one worker node.

The worker node(s) host the Pods that are the components of the application workload. The control plane manages the worker nodes and the Pods in the cluster. In production environments, the control plane usually runs across multiple computers and a cluster usually runs multiple nodes, providing fault-tolerance and high availability.

This document outlines the various components you need to have for a complete and working Kubernetes cluster.

123. The “kubernetes.io” website contains the following description of “Pods” which make up the ’785 Accused System. *See* <https://kubernetes.io/docs/concepts/workloads/pods/> (last accessed Mar. 15, 2024).

Pods

Pods are the smallest deployable units of computing that you can create and manage in Kubernetes.

A *Pod* (as in a pod of whales or pea pod) is a group of one or more containers, with shared storage and network resources, and a specification for how to run the containers. A Pod's contents are always co-located and co-scheduled, and run in a shared context. A Pod models an application-specific "logical host": it contains one or more application containers which are relatively tightly coupled. In non-cloud contexts, applications executed on the same physical or virtual machine are analogous to cloud applications executed on the same logical host.

As well as application containers, a Pod can contain [init containers](#) that run during Pod startup. You can also inject [ephemeral containers](#) for debugging if your cluster offers this.

124. The “kubernetes.io” website contains the following description of “DNS for Services and Pods” which make up the ’785 Accused System. *See* <https://kubernetes.io/docs/concepts/services-networking/dns-pod-service/> (last accessed Mar. 15, 2024).

DNS for Services and Pods

Kubernetes creates DNS records for Services and Pods. You can contact Services with consistent DNS names instead of IP addresses.

Kubernetes publishes information about Pods and Services which is used to program DNS. Kubelet configures Pods' DNS so that running containers can lookup Services by name rather than IP.

Services defined in the cluster are assigned DNS names. By default, a client Pod's DNS search list includes the Pod's own namespace and the cluster's default domain.

125. As described above, the “kubernetes.io” website represents that, to the extent that the ’785 Accused System is configured to register *anything* in a virtual network, it is configured to register *Pods* in a virtual network.

126. Based at least in part on this representation, a Pod is not a “device” as claimed by the ’785 Patent.

127. As such, Assurant does not infringe the ’785 Patent at least because the ’785 Accused System does not register *devices* in a virtual network.

128. As such, Assurant does not directly infringe the ’785 Patent, either literally or under the doctrine of equivalents.

129. Likewise, at least because there is no direct infringement, Assurant does not induce infringement of the ’785 Patent or otherwise contribute to infringement of the ’785 Patent.

130. Pursuant to the Federal Declaratory Judgment Act, 28 U.S.C. § 2201 et seq., Assurant seeks a declaration that it (including but not limited to through its use of the ’785 Accused System) does not infringe the ’785 Patent.

**COUNT V: DECLARATORY JUDGMENT FOR NON-INFRINGEMENT
OF THE '080 PATENT**

131. Assurant repeats the allegations in the preceding paragraphs as if fully set forth herein.

132. IV has indicated that, absent license, it intends to enforce its intellectual property rights against Assurant. According to IV, there is a “pressing need” for Assurant to take a license as a “crucial step to ensure compliance with IV’s patent portfolio,” including the '080 Patent.

133. IV has alleged that certain third-party software branded as “Hadoop” (“the '080 Accused System”) infringes one or more claim of the '080 Patent.

134. As a result, there is an actual, justiciable, substantial, and immediate controversy between Assurant and IV regarding whether Assurant has infringed and/or continues to infringe the '080 Patent.

135. Assurant does not make, use, offer to sell, or sell any product and/or system within the United States (including but not limited to the '080 Accused System), or import into the United States any product and/or system (including but not limited to the '080 Accused System) in a manner which infringes the '080 Patent.

136. Each independent claim of the '080 Patent requires, *inter alia*, (1) “spawning at least one child distributed sequential computing [system] program,” (2) “when at least one intermediate condition occurs within the at least one distributed sequential [computing] program,” and (3) “wherein the at least one intermediate condition comprising one intermediate result that will be required by the at least one spawned child distributed sequential computing program to continue computation.”

137. Assurant does not infringe the '080 Patent at least because the '080 Accused System does not spawn child distributed sequential computing programs based on intermediate results that

will be required by the spawned child distributed sequential computing programs to continue computation.

138. By way of example, and on information and belief, based on the “hadoop.apache.org” website, “Hadoop MapReduce is a software framework for easily writing applications which process vast amounts of data (multi-terabyte data-sets) in-parallel on large clusters (thousands of nodes) of commodity hardware in a reliable, fault-tolerant manner.” *See* https://hadoop.apache.org/docs/r1.2.1/mapred_tutorial.html (last accessed Mar. 15, 2024).

139. On information and belief, based on the information contained on the “hadoop.apache.org” website, “[a] MapReduce *job* usually splits the input data-set into independent chunks which are processed by the *map tasks* in a completely parallel manner.” *See* https://hadoop.apache.org/docs/r1.2.1/mapred_tutorial.html (last accessed Mar. 15, 2024).

140. On information and belief, based on the information contained on the “hadoop.apache.org” website, “[t]he Hadoop MapReduce framework spawns one map task for each `InputSplit` generated by the `InputFormat` for the job.” *See* https://hadoop.apache.org/docs/r1.2.1/mapred_tutorial.html (last accessed Mar. 15, 2024).

141. On information and belief, based on the information contained on the “hadoop.apache.org” website, “[t]he default behavior of file-based `InputFormats`, typically subclasses of `FileInputFormat`, is to split the input into logical `InputSplits` based on the total size, in bytes, of the input files.” *See* [https://hadoop.apache.org/docs/r1.2.1/api/org/apache/hadoop/mapred/InputFormat.html#getSplits\(org.apache.hadoop.mapred.JobConf,%20int\)](https://hadoop.apache.org/docs/r1.2.1/api/org/apache/hadoop/mapred/InputFormat.html#getSplits(org.apache.hadoop.mapred.JobConf,%20int)) (last accessed Mar. 15, 2024).

142. On information and belief, the '080 Accused System does not spawn child distributed sequential computing programs based on intermediate results that will be required by the spawned child distributed sequential computing programs to continue computation.

143. As such, Assurant does not directly infringe the '080 Patent, either literally or under the doctrine of equivalents.

144. Likewise, at least because there is no direct infringement, Assurant does not induce infringement of the '080 Patent or otherwise contribute to infringement of the '080 Patent.

145. Pursuant to the Federal Declaratory Judgment Act, 28 U.S.C. § 2201 et seq., Assurant seeks a declaration that it (including but not limited to through its use of the '080 Accused System) does not infringe the '080 Patent.

DEMAND FOR JURY TRIAL

Assurant hereby demands a trial by jury on all claims so triable.

PRAYER FOR RELIEF

WHEREFORE, Assurant respectfully requests a declaratory judgment against IV as follows:

- A. A declaration that Assurant does not infringe the '391 Patent;
- B. A declaration that Assurant does not infringe the '844 Patent;
- C. A declaration that Assurant does not infringe the '167 Patent;
- D. A declaration that Assurant does not infringe the '785 Patent;
- E. A declaration that Assurant does not infringe the '080 Patent;
- F. A declaration that this case is exceptional within the meaning of 35 U.S.C. § 285, thereby entitling Assurant to a recovery of its costs including reasonable attorneys' fees under 35 U.S.C. § 285 and all other applicable statutes, rules, and common law, including this Court's inherent authority;

- G. Declaring that judgment be entered in favor of Assurant, and against IV on Assurant's claims;
- H. An order enjoining IV and those in privity with IV from asserting the '391, '844, '167, '785, and '080 Patents against Assurant and Assurant's representatives, agents, affiliates, subsidiaries, vendors and customers; and
- I. Such other equitable and/or legal relief as this Court or a jury may deem proper and just under the circumstances.

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