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

Civil Action No.:

**COMSERVE SOLUTIONS LLC, a Delaware limited liability company,**

Plaintiff,

v.

**VMWARE, INC., a Delaware corporation,**

Defendant.

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**COMPLAINT FOR INFRINGEMENT OF PATENT**

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Now comes, Plaintiff, Comserve Solutions LLC. ("Plaintiff" or "Comserve"), by and through undersigned counsel, and respectfully alleges, states, and prays as follows:

## NATURE OF THE ACTION

1. This is an action for patent infringement under the Patent Laws of the United States, Title 35 United States Code ("U.S.C.") to prevent and enjoin Defendant VMware, Inc. (hereinafter "Defendant"), from infringing and profiting, in an illegal and unauthorized manner, and without authorization and/or consent from Plaintiff from U.S. Patent No. 7,194,737 ("the '737 Patent"), which is attached hereto as Exhibit A and incorporated herein by reference, and from U.S. Patent No. 8,042,107 ("the '107 Patent"), which is attached hereto as Exhibit B and incorporated herein by reference, and may collectively be referred to as the "Patents-in-Suit," and pursuant to 35 U.S.C. §271, and to recover damages, attorney's fees, and costs.

## THE PARTIES

2. Plaintiff is a Delaware limited liability company with a place of business at 251 Little Falls Drive, Wilmington, Delaware, 19808.

3. Upon information and belief, Defendant is a corporation organized under the laws of Delaware, having a principal place of business at 3401 Hillview Ave, Palo Alto, California 94304. Upon information and belief, Defendant may be served with process c/o Corporation Service Company, 251 Little Falls Drive, Wilmington, Delaware 19808.

4. Defendant maintains a physical presence in this district through its consistent use an office located at 380 Interlocken Crescent Blvd., Suite 500, Broomfield, Colorado 80021.

## JURISDICTION AND VENUE

5. This is an action for patent infringement in violation of the Patent Act of the United States, 35 U.S.C. §§1 *et seq*.

6. The Court has subject matter jurisdiction over this action pursuant to 28 U.S.C. §§1331 and 1338(a).

7. This Court has personal jurisdiction over Defendant by virtue of its systematic and continuous contacts with this jurisdiction and its residence in this District, as well as because of the injury to Plaintiff, and the cause of action Plaintiff has risen in this District, as alleged herein.

8. Defendant is subject to this Court's specific and general personal jurisdiction pursuant to its substantial business in this forum, including: (i) at least a portion of the infringements alleged herein; (ii) regularly doing or soliciting business, engaging in other persistent courses of conduct, and/or deriving substantial revenue from goods and services provided to individuals in this forum state and in this judicial District; and (iii) being physically located in this District.

9. Venue is proper in this judicial district pursuant to 28 U.S.C. §1400(b) because Defendant 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 physical presence, and regular and established place of business in this District.

## FACTUAL ALLEGATIONS

10. On March 20, 2007, the United States Patent and Trademark Office ("USPTO") duly and legally issued the '737 Patent, entitled "SYSTEM AND METHOD FOR EXPEDITING AND AUTOMATING MAINFRAME COMPUTER SETUP" after a full and fair examination. The '737 Patent is attached hereto as Exhibit A and incorporated herein as if fully rewritten.

11. Plaintiff owns of the '737 Patent, having received all right, title and interest in and to the '737 Patent from the inventors. Plaintiff possesses all rights of recovery under the '737 Patent, including the exclusive right to recover for past infringement.

12. On October 18, 2011, the United States Patent and Trademark Office ("USPTO") duly and legally issued the '107 Patent, entitled "SYSTEM AND METHOD FOR EXPEDITING AND AUTOMATING MAINFRAME COMPUTER SETUP" after a full and fair examination. The '107 Patent is attached hereto as Exhibit B and incorporated herein as if fully rewritten.

13. The '107 Patent is a divisional of the '737 Patent and their Specifications are effectively identical except for the different claims sets and the cross reference to related applications shown in the '107 Patent.

14. Plaintiff owns of the '107 Patent, having received all right, title and interest in and to the '737 Patent from the inventors. Plaintiff possesses all rights of recovery under the '107 Patent, including the exclusive right to recover for past infringement.

15. To the extent required, Plaintiff has complied with all marking requirements under 35 U.S.C. § 287.

16. The invention claimed in the Patents-in-suit pertain to systems and methods for upgrading operating systems on a mainframe computer.

17. Claim 1 of the '737 Patent states:

> "1. A method for upgrading an operating system on a mainframe computer system, said method comprising:
>
> automatically receiving source profile information, said source profile information representing an existing configuration of at least one of hardware and software on said mainframe computer system;
>
> using a client computer system to generate a base operating system, said base operating system comprising a configuration of operating system software components for said mainframe computer system, wherein the client computer system communicates with said mainframe computer system over a communication network;
>
> transferring said base operating system from said client computer system to said mainframe computer; and
>
> using the client computer system to automatically customize said base operating system comprising said mainframe computer system to incorporate elements in said source profile information, wherein after said base operating system is customized, said mainframe computer system is automatically adapted for an initial program load." See Ex. A.

18. Claim 5 of the '107 Patent states:

> "5. A system for a remote installation of at least one of an operating system upgrade and an optional product on a mainframe computer system, said system comprising:
>
> a personal computer, said personal computer programmed and configured to interface with said mainframe computer system over a communication network;
>
> a system discovery module, said system discovery module configured to:
>
> perform system discovery to determine existing components installed on said mainframe computer system and how said mainframe computer system is configured, wherein said system discovery occurs substantially automatically;
>
> generate information in response to said system discovery, wherein said information represents said existing components and said configuration; and
>
> store said information representing said existing components and said configuration in a database;
>
> an operating system transfer module, said operating system transfer module configured to transfer a plurality of mainframe operating system components

comprising said operating system upgrade to said mainframe after said system discovery is performed; and

an upgrade installation module, said upgrade installation module configured to:

combine said plurality of mainframe operating system components with said existing components and customize said combination of components in response to receiving instructions from said personal computer, wherein said combining and said customizing are performed automatically using said information;

perform an initial program load using said combination of components on said mainframe computer system;

receive a selection of said optional product from said personal computer to be included in said upgrade after said initial program load; and

install said optional product identified in said selection." See Ex. B.

19. As identified in the Patents-in-Suit, prior art systems had technological faults. See Ex. A at Col 1:30-33; Ex. B at Col.41-44.

20. More particularly, the Patents-in-Suit identifies that the prior art provided that as large-scale, mainframe computer systems continue to evolve, many existing computing platforms are continuously supported, and on-line access to legacy data is available. Yet, installation and maintenance of mainframe computer system operating systems remains an arduous task. Installing and configuring a mainframe computer system depends, in large part, on the operator's technical skill level. For example, in order to set up or upgrade a mainframe computer system, which is sometimes referred to as an initial program load ("IPL"), a skilled mainframe computer systems programmer is required. Unlike personal computers that automatically "boot-up" after receiving power (i.e., being turned on), a mainframe IPL is considerably complex and time-consuming. For example, one or more skilled technicians typically expend three to four days to upgrade a mainframe computer operating system and prepare the system for an IPL Ex. A at Col. 1:14-44; Ex. B at Col.1:25-55.

21. However, computers continued to evolve and get smaller. Namely, smaller-scaled computer systems, for example, personal computers, desktops server computers, and mid-range computer systems became more prevalent in the marketplace. The present disclosure recognized the need and computer centric problem to fit the "old with new" technology. The Patents-in-Suit recognized that the ability to complete mainframe operating system upgrades, combined with complex optional product installations on schedule and on budget were increasingly problematic over time. Ex. A at Col. 1:60-2:16; Ex. B at Col.2:4-27.

22. To address this specific technical problem, Claim 1 in the '737 Patent comprises a non-abstract method for upgrading an operating system on a mainframe computer system. Ex. A at Col. 12:50-13:3.

23. To further address this specific technical problem, Claim 5 in the '107 Patent comprises a non-abstract system for a remote installation of at least one of an operating system upgrade on a mainframe computer system. Ex. B at Col. 13:21-14:19.

24. Claim 1 of the '737 Patent and Claim 5 of the '107 Patent addressed the need for an improved way to upgrade an operating system.

25. Specifically, to deal with the computer centric problems of upgrading operating systems, Claim 1 of the '737 Patent and Claim 5 of the '107 Patent have specific elements that, as combined, accomplish the desired result of decreasing cost, reducing the likelihood of problems associated with the upgrade process. Further, these specific elements also accomplish these desired results to overcome the then existing problems in the relevant field of networked computer systems. *Ancora Technologies, Inc. v. HTC America, Inc.*, 908 F.3d 1343, 1348 (Fed. Cir. 2018) (holding that improving computer security can be a non-abstract computer-functionality improvement if done by a specific technique that departs from earlier approaches to solve a specific

computer problem). See also *Data Engine Techs. LLC v. Google LLC*, 906 F.3d 999 (Fed. Cir. 2018); *Core Wireless Licensing v. LG Elecs., Inc.*, 880 F.3d 1356 (Fed. Cir. 2018); *Finjan, Inc. v. Blue Coat Sys., Inc.*, 879 F.3d 1299 (Fed. Cir. 2018); *Uniloc USA, Inc. v. LG Electronics USA, Inc.*, 957 F.3d 1303 (Fed. Cir. April 30, 2020).

26. Claims need not articulate the advantages of the claimed combinations to be eligible. *Uniloc USA, Inc. v. LG Elecs. USA, Inc.*, 957 F.3d 1303, 1309 (Fed. Cir. 2020).

27. These specific elements of Claim 1 of the '737 Patent and Claim 5 of the '107 Patent were an unconventional arrangement of elements because the prior art methodologies would simply use human operators to tediously upgrade various computer components. Claim 1 of the '737 Patent and Claim 5 of the '107 Patent were able to unconventionally generate a system and method for upgrading the mainframe computer in a more efficient manner to solve the previous computer-centric problems. *Cellspin Soft, Inc. v. FitBit, Inc.*, 927 F.3d 1306 (Fed. Cir. 2019).

28. Further, regarding the specific non-conventional and non-generic arrangements of known, conventional pieces to overcome an existing problem, each of Claim 1 of the '737 Patent and Claim 5 of the '107 Patent provides specific claim limitations, any of which could be removed or performed differently to permit a system or method of upgrading an operating system on a mainframe computer in a different way. *Bascom Global Internet Servs., Inc. v. AT&T Mobility LLC*, 827 F.3d 1341 (Fed. Cir. 2016); See also *DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245 (Fed. Cir. 2014).

29. Based on the allegations, it must be accepted as true at this stage, that Claim 1 of the '737 Patent and Claim 5 of the '107 Patent recites a specific, plausibly inventive way of upgrading an operating system using specific protocols rather than the general idea of communicating between two networked devices. *Cellspin Soft, Inc. v. Fitbit, Inc.*, 927 F.3d 1306,

1319 (Fed. Cir. 2019), *cert. denied sub nom. Garmin USA, Inc. v. Cellspin Soft, Inc.*, 140 S. Ct. 907, 205 L. Ed. 2d 459 (2020).

30. Alternatively, there is at least a question of fact that must survive the pleading stage as to whether these specific elements of Claim 1 of the '737 Patent and Claim 5 of the '107 Patent were an unconventional arrangement of elements. *Aatrix Software, Inc. v. Green Shades Software, Inc.*, 882 F.3d 1121 (Fed. Cir. 2018) See also *Berkheimer v. HP Inc.*, 881 F.3d 1360 (Fed. Cir. 2018), *cert. denied*, 140 S. Ct. 911, 205 L. Ed. 2d 454 (2020).

31. Claim 1 of the '737 Patent recites a non-abstract method for upgrading an operating system.

32. Claim 1 of the '737 Patent provides the practical application of a method for upgrading an operating system

33. Claim 1 of the '737 Patent provides an inventive step for upgrading an operating system to address the deficiencies and needs identified in the Background section of the '737 Patent. See Ex. A.

34. Claim 5 of the '107 Patent recites a non-abstract system for a remote installation of at least one of an operating system upgrade and an optional product on a mainframe computer system.

35. Claim 5 of the '107 Patent provides the practical application of a system for a remote installation of at least one of an operating system upgrade and an optional product on a mainframe computer system.

36. Claim 5 of the '107 Patent provides an inventive step for a system for a remote installation of at least one of an operating system upgrade and an optional product on a mainframe

computer system.to address the deficiencies and needs identified in the Background section of the '107 Patent. See Ex. B.

37. Defendant commercializes, inter alia, methods that perform all the steps recited in at least one claim of the '737 Patent. More particularly, Defendant commercializes, inter alia, methods that perform all the steps recited in Claim 1 of the '737 Patent. Specifically, Defendant makes, uses, sells, offers for sale, or imports a method that encompasses that which is covered by Claim 1 of the '737 Patent.

38. Defendant commercializes, inter alia, methods that perform all the steps recited in at least one claim of the '107 Patent. More particularly, Defendant commercializes, inter alia, methods that perform all the steps recited in Claim 5 of the '107 Patent. Specifically, Defendant makes, uses, sells, offers for sale, or imports a method that encompasses that which is covered by Claim of the '107 Patent.

## DEFENDANT'S PRODUCT(S)

39. Defendant offers solutions, such as the "VMware vSphere" system (the "Accused Product")[1], that enables the upgrading of operating systems on a computer.

**i.** The Accused Product vs. the '737 Patent

40. A non-limiting and exemplary claim chart comparing the Accused Product of Claim 1 of the '737 Patent is attached hereto as Exhibit C and is incorporated herein as if fully rewritten.

41. As recited in Claim 1, a system, at least in internal testing and usage, utilized by the Accused Product practices automatically receiving source profile information, said source profile information representing an existing configuration of at least one of hardware and software on said mainframe computer system. See Ex. C.

[1] The Accused Product is just one of the products provided by Defendant, and Plaintiff's investigation is on-going to additional products to be included as an Accused Product that may be added at a later date.

42. As recited in one step of Claim 1, the system, at least in internal testing and usage, utilized by the Accused Product practices using a client computer system to generate a base operating system, said base operating system comprising a configuration of operating system software components for said mainframe computer system, wherein the client computer system communicates with said mainframe computer system over a communication network. See Ex. C.

43. As recited in another step of Claim 1, the system, at least in internal testing and usage, utilized by the Accused Product practices transferring said base operating system from said client computer system to said mainframe computer. See Ex. C.

44. As recited in another step of Claim 1, the system, at least in internal testing and usage, utilized by the Accused Product practices using the client computer system to automatically customize said base operating system comprising said mainframe computer system to incorporate elements in said source profile information, wherein after said base operating system is customized, said mainframe computer system is automatically adapted for an initial program load. See Ex. C.

45. The elements described in the preceding paragraphs are covered by at least Claim 1 of the '737 Patent. Thus, Defendant's use of the Accused Product is enabled by the method described in the '737 Patent.

**ii.** <u>The Accused Product vs. the '107 Patent</u>

46. A non-limiting and exemplary claim chart comparing the Accused Product of Claim 5 of the '107 Patent is attached hereto as Exhibit D and is incorporated herein as if fully rewritten.

47. As recited in Claim 5, a system, at least in internal testing and usage, utilized by the Accused Product provides and/or uses a personal computer, said personal computer

programmed and configured to interface with said mainframe computer system over a communication network. See Ex. D.

48. As recited in one element of Claim 5, the system, at least in internal testing and usage, utilized by the Accused Product provides and/or uses a system discovery module, said system discovery module configured to: perform system discovery to determine existing components installed on said mainframe computer system and how said mainframe computer system is configured, wherein said system discovery occurs substantially automatically; generate information in response to said system discovery, wherein said information represents said existing components and said configuration; and store said information representing said existing components and said configuration in a database. See Ex. D.

49. As recited in another element of Claim 5, the system, at least in internal testing and usage, utilized by the Accused Product provides and/or uses an operating system transfer module, said operating system transfer module configured to transfer a plurality of mainframe operating system components comprising said operating system upgrade to said mainframe after said system discovery is performed. See Ex. D.

50. As recited in another element of Claim 5, the system, at least in internal testing and usage, utilized by the Accused Product provides and/or uses an upgrade installation module, said upgrade installation module configured to: combine said plurality of mainframe operating system components with said existing components and customize said combination of components in response to receiving instructions from said personal computer, wherein said combining and said customizing are performed automatically using said information; perform an initial program load using said combination of components on said mainframe computer system; receive a selection of

said optional product from said personal computer to be included in said upgrade after said initial program load; and install said optional product identified in said selection. See Ex. D.

51. The elements described in the preceding paragraphs are covered by at least Claim 5 of the '107 Patent. Thus, Defendant's use of the Accused Product is enabled by the system described in the '107 Patent.

**INFRINGEMENT OF THE PATENTS-IN-SUIT**

52. Plaintiff realleges and incorporates by reference all of the allegations set forth in the preceding paragraphs

53. In violation of 35 U.S.C. § 271, Defendant is now, and has been directly infringing the Patents-in-Suit.

54. Defendant has had knowledge of infringement of the Patents-in-Suit at least as of the service of the present Complaint.

55. Defendant has directly infringed and continues to directly infringe at least one claim of the Patents-in-Suit by using, at least through internal testing or otherwise, the Accused Product without authority in the United States, and will continue to do so unless enjoined by this Court. As a direct and proximate result of Defendant's direct infringement of the Patents-in-Suit, Plaintiff has been and continues to be damaged.

56. Defendant has induced others to infringe the Patents-in-Suit by encouraging infringement, knowing that the acts Defendant induced constituted patent infringement, and its encouraging acts actually resulted in direct patent infringement.

57. By engaging in the conduct described herein, Defendant has injured Plaintiff and is thus liable for infringement of the Patents-in-Suit, pursuant to 35 U.S.C. § 271.

58. Defendant has committed these acts of infringement without license or authorization.

59. As a result of Defendant's infringement of the Patents-in-Suit, Plaintiff has suffered monetary damages and is entitled to a monetary judgment in an amount adequate to compensate for Defendant's past infringement, together with interests and costs.

60. Plaintiff will continue to suffer damages in the future unless Defendant's infringing activities are enjoined by this Court. As such, Plaintiff is entitled to compensation for any continuing and/or future infringement up until the date that Defendant is finally and permanently enjoined from further infringement.

61. Plaintiff reserves the right to modify its infringement theories as discovery progresses in this case; it shall not be estopped for infringement contention or claim construction purposes by the claim charts that it provides with this Complaint. The claim chart depicted in Exhibit B is intended to satisfy the notice requirements of Rule 8(a)(2) of the Federal Rule of Civil Procedure and does not represent Plaintiff's preliminary or final infringement contentions or preliminary or final claim construction positions.

## DEMAND FOR JURY TRIAL

62. Plaintiff demands a trial by jury of any and all causes of action.

## PRAYER FOR RELIEF

WHEREFORE, Plaintiff prays for the following relief:

a. That Defendant be adjudged to have directly infringed the Patents-in-Suit either literally or under the doctrine of equivalents;

b. An accounting of all infringing sales and damages including, but not limited to, those sales and damages not presented at trial;

c. That Defendant, its officers, directors, agents, servants, employees, attorneys, affiliates, divisions, branches, parents, and those persons in active concert or participation with any of them, be permanently restrained and enjoined from directly infringing the Patents-in-Suit;

d. An award of damages pursuant to 35 U.S.C. §284 sufficient to compensate Plaintiff for the Defendant's past infringement and any continuing or future infringement up until the date that Defendant is finally and permanently enjoined from further infringement, including compensatory damages;

e. An assessment of pre-judgment and post-judgment interest and costs against Defendant, together with an award of such interest and costs, in accordance with 35 U.S.C. §284;

f. That Defendant be directed to pay enhanced damages, including Plaintiff's attorneys' fees incurred in connection with this lawsuit pursuant to 35 U.S.C. §285; and

g. That Plaintiff be granted such other and further relief as this Court may deem just and proper.

Dated: August 12, 2021

Respectfully submitted,

s/ Howard L. Wernow
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