

**IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF TEXAS
DALLAS DIVISION**

CUMBERLAND SYSTEMS LLC,

Plaintiff,

v.

VMWARE, INC.,

Defendant.

CIVIL ACTION NO 3:18-cv-592

JURY TRIAL DEMANDED

ORIGINAL COMPLAINT FOR PATENT INFRINGEMENT

1. This is an action for patent infringement in which Cumberland Systems LLC makes the following allegations against VMware, Inc.

PARTIES

2. Plaintiff Cumberland Systems LLC (“Plaintiff”) is a Texas limited liability company with its principal place of business at 6800 Weiskopf Avenue, Suite 150, McKinney, TX 75070.

3. On information and belief, VMware Inc. (“Defendant” or “VMware”) is a corporation organized and existing under the laws of the State of Delaware, with its principal place of business at 3401 Hillview Ave, Palo Alto, CA 94304.

JURISDICTION AND VENUE

4. This action arises under the patent laws of the United States, Title 35 of the United States Code. This Court has subject matter jurisdiction pursuant to 28 U.S.C. §§ 1331 and 1338(a).

5. Venue is proper in this district under 28 U.S.C. §§ 1391(c) and 1400(b). On information and belief, acts of infringement have been committed in this District. Additionally, VMware has a regular and established place of business in this District, including, without

limitation, its Farmers Branch location at 1503 LBJ Parkway, Suite 700, Farmers Branch, TX 75234.

6. On information and belief, Defendant is subject to this Court's specific and general personal jurisdiction pursuant to due process and/or the Texas Long Arm Statute, due at least to its substantial business in this forum, including: (i) at least a portion of the infringements alleged herein; and (ii) regularly doing or soliciting business, engaging in other persistent courses of conduct, and/or deriving substantial revenue from goods and services provided to individuals in Texas and in this Judicial District.

COUNT I

INFRINGEMENT OF U.S. PATENT NO. 8,023,647

7. Plaintiff is the owner of United States Patent No. 8,023,647 ("the '647 patent") entitled "Password self encryption method and system and encryption by keys generated from personal secret information." The '647 Patent issued on September 20, 2011. A true and correct copy of the '647 Patent is attached as Exhibit A.

8. Defendant owns, uses, operates, advertises, controls, sells, and otherwise provides products and/or services that infringe the '647 patent. The '647 patent provides, among other things, "A method comprising: submitting a user identification for a user from a user computer to a server computer; receiving a set of information at the user computer from the server computer, in response to the submission of the user identification for the user; wherein the set of information includes a parameter of a key; and further comprising using the user computer to convert user confidential information to a number x , wherein the number x is dependent on the user confidential information; using the user computer to compute a number e which is a function of x and which is a function of the user confidential information; using the user computer to pad the number x to convert x to X_p ; using the user computer to encrypt x_p by using the parameter of the key and the number e to form a cipher C , wherein C is a function of the user confidential information; and submitting the cipher C from the user computer to the server computer."

9. Defendant directly and/or through intermediaries, made, has made, used, imported, provided, supplied, distributed, sold, and/or offered for sale products and/or services that infringed one or more claims of the '647 patent, including at least Claim 1, in this district

and elsewhere in the United States. Particularly, the Defendant's use of ManageEngine's Password Manager Pro infringes the '647 patent. By making, using, importing, offering for sale, and/or selling such products and services, and all like products and services, Defendant has injured Plaintiff and is thus liable for infringement of the '647 patent pursuant to 35 U.S.C. § 271.

10. Based on present information and belief, VMware submits a user identification for a user from a user computer to a server computer. For example, VMware employees install Password Manager Pro on an installation computer (claimed user computer) which is further connected to a relational database management system (RDBMS) (claimed server computer) over an SSL connection. An SSL connection begins with an SSL handshake during which the VMware employees submit a user identification from the installation computer to the RDBMS. The user identification is in the form of at least a Client Hello message including at least a supported cipher suite and/or a session ID. Further, during the SSL handshake if the RDBMS sends a Client Certificate Request to the installation computer, VMware employees submit an additional user identification in the form of a SSL Client Certificate from the installation computer to the RDBMS. Similarly, the installation computer is also connected to a secondary backup server over SSL, which is also a claimed server computer and accepts a user identification from the installation computer in the same manner.

11. Based on present information and belief, VMware receives a set of information at the user computer, wherein the set of information includes a parameter of a key. For example, VMware employees install Password Manager Pro on an installation computer (claimed user computer) which is further connected to a relational database management system (RDBMS) (claimed server computer) over an SSL connection. During the SSL handshake procedure, in response to submission of the Client Hello message and/or SSL Client Certificate, the installation computer receives a set of information including a parameter of a key from the RDBMS. For example, the installation computer receives the selected cipher suite from the RDBMS which is a claimed parameter of a key (since the cipher suite is used to derive the key used to encrypt the SSL communications). Further, if any of the Diffie-Hellman based key exchange algorithms such as DHE_RSA, ECDHE_RSA, DH_RSA, DHE_DSS, DH_DSS, ECDH_RSA, ECDH_ECDSA and ECDHE_ECDSA are selected during the SSL handshake, the installation computer also receives a public key from the RDBMS which is also a claimed parameter of the

symmetric key used to encrypt the subsequent SSL communications. Similarly, the installation computer is also connected to a secondary backup server over SSL, which is also a claimed server computer and sends a set of information including a parameter of a key in the same manner.

12. Based on information and belief, VMware uses the user computer to convert user confidential information to a number x , wherein the number x is dependent on the user confidential information. For example, VMware employees install Password Manager Pro on an installation computer (claimed user computer) in order to store and manage resources (such as passwords and SSH keys). Further, Password Manager Pro encrypts the resources using Advanced Encryption Standard (AES) algorithm which necessarily involves converting the resources (user confidential information into a numerical representation (claimed number x) which is a function of the resources.

13. Based on present information and belief, VMware uses the user computer to compute a number e which is a function of x and which is a function of the user confidential information. For example, when VMware employees add a resource (such as a password or SSH key), they use the installation computer to apply at least a MixColumns transformation as part of the AES encryption – the AES algorithm computes a series of numbers (claimed number e) from the numerical representation of the resource (claimed x).

14. Based on present information and belief, VMware uses the user computer to pad the number x to convert x to x_p . For example, when VMware employees add a resource (such as a password or SSH key), they use the installation computer to apply at least a `AddRoundKey()` transformation to the numerical representation of the resource (claimed number x). The `AddRoundKey()` includes an XOR transformation which results in a padded representation.

15. Based on present information and belief, VMware uses the user computer to encrypt x_p by using the parameter of the key and the number e to form a cipher C , wherein C is a function of the user confidential information. For example, when VMware employees use Password Manager Pro on the installation computer (claimed user computer) to store and manage resources (such as passwords and SSH keys), Password Manager Pro sends the AES encrypted resource to the RDBMS (claimed server computer) using SSL. As per the SSL protocol, the installation computer further encrypts the AES encrypted resource using the symmetric key derived as part of the SSL handshake procedure. Therefore, the installation

computer encrypts the padded numerical representation of the resource (claimed xp) by using the number e (from the AES encryption process) and the parameter of key (received via the SSL handshake explained above) to form the SSL-encrypted payload (cipher C). Similarly, the installation computer is also connected to a secondary backup server over SSL, which is also a claimed server computer and sends a set of information including a parameter of a key in the same manner – in which case that parameter of a key is used to encrypt the AES encrypted resource when it is transmitted from the installation computer to the secondary backup server over SSL.

16. Based on present information and belief, VMware submits the cipher C from the user computer to the server computer. For example, when VMware employees use Password Manager Pro on the installation computer (claimed user computer) to store and manage resources (such as passwords and SSH keys), Password Manager Pro submits the SSL payload (containing the resource) to the RDBMS and/or to the secondary backup server.

17. In the alternative, because the manner of use by Defendant differs in no substantial way from language of the claims, if Defendant is not found to literally infringe, Defendant infringes under the doctrine of equivalents.

18. Defendant's aforesaid activities have been without authority and/or license from Plaintiff.

19. In addition to what is required for pleadings in patent cases, and to the extent any marking was required by 35 U.S.C. § 287, Plaintiff and all predecessors in interest to the '647 Patent complied with all marking requirements under 35 U.S.C. § 287.

20. Plaintiff is entitled to recover from Defendant the damages sustained by Plaintiff as a result of the Defendant's wrongful acts in an amount subject to proof at trial, which, by law, cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

PRAYER FOR RELIEF

WHEREFORE, Plaintiff respectfully requests that this Court enter:

1. A judgment in favor of Plaintiff that Defendant has infringed the '647 Patent;
2. A judgment and order requiring Defendant to pay Plaintiff its damages, costs, expenses, and prejudgment and post-judgment interest for Defendant's infringement of the '647 Patent as provided under 35 U.S.C. § 284;

3. An award to Plaintiff for enhanced damages resulting from the knowing, deliberate, and willful nature of Defendant's prohibited conduct with notice being made at least as early as the date of the filing of this Complaint, as provided under 35 U.S.C. § 284;

4. A judgment and order finding that this is an exceptional case within the meaning of 35 U.S.C. § 285 and awarding to Plaintiff its reasonable attorneys' fees; and

5. Any and all other relief to which Plaintiff may show itself to be entitled.

DEMAND FOR JURY TRIAL

Plaintiff, under Rule 38 of the Federal Rules of Civil Procedure, requests a trial by jury of any issues so triable by right.

Respectfully Submitted,

CUMBERLAND SYSTEMS LLC

/s/ Papool S. Chaudhari

Dated: March 13, 2018

By: _____

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