	Case 3:18-cv-04716 Documer	nt 1 Filed 08/06/18 Page 1 o	f 30		
1 2 3 4 5 6	Michael Ng (CA SBN 237915) Michael M. Rosen (CA SBN 230964) KOBRE & KIM LLP 150 California Street, 19th Floor San Francisco, CA 94111 Tel: (415) 582-4800 Michael.ng@kobrekim.com Michael.rosen@kobrekim.com <i>Counsel for Plaintiff ScaleMP, Inc.</i>				
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8	UNITED STATES DISTRICT COURT				
9	FOR THE NORTHERN D	ISTRICT OF CALIFORNIA			
10	SCALEMP, INC., Plaintiff,				
11 12	V.	Case No			
12	TIDALSCALE, INC.,	COMPLAINT			
13	ISAAC NASSI, and DAVID P. REED,				
14	Defendants.	JURY TRIAL DEMANDED			
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20	Plaintiff ScaleMP, Inc. ("ScaleMP") submits this complaint against Defendants				
21	TidalScale, Inc. ("TidalScale"), Dr. Isaac Nassi				
22	following:		C		
23	PAI	RTIES			
24	1. ScaleMP is a corporation duly organized and existing under the laws of the State				
25	of Delaware, with its corporate headquarters located at 2175 Lemoine Ave., Suite 401, Fort Lee,				
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		1	COMPLAINT		

New Jersey 07024. From 2004-2013, ScaleMP was headquartered in this judicial district, at
 20863 Stevens Creek Blvd, Cupertino, California 95014.

2. ScaleMP is an industry leader in virtualization for in-memory high-end computing and a pioneer in developing technologies enabling the integration of multiple processors and memories into shared-memory computers. By way of assignment, it is the owner of all right, title and interest in U.S. Patent Nos. 8,544,004 (the "004 patent"), 8,832,692 (the "692 patent"), and 9,020,801 ("the '801 patent") (collectively, the "Patents-In-Suit").

3. On information and belief, TidalScale is a Delaware corporation with its principal place of business at 1694 Dell Ave, Campbell, California 95008.

4. On information and belief, Dr. Isaac Nassi ("Nassi") is a U.S. citizen domiciled at 14560 La Rinconada Drive, Los Gatos, California. On information and belief, Defendant Nassi is the Founder, Chairman of the Board, and Chief Technical Officer of TidalScale.

5. On information and belief, Dr. David Reed ("Reed") is a U.S. citizen domiciled at 859 Greendale Avenue, Needham, Massachusetts. On information and belief, Defendant Reed is the Chief Scientist of TidalScale.

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JURISDICTION AND VENUE

6. This action arises under the patent laws of the United States, 35 U.S.C. § 1 *et seq.*, and under the Defend Trade Secrets Act, 18 U.S.C. § 1836 *et seq.* This Court has subject matter jurisdiction over this patent infringement and trade secret action pursuant to 28 U.S.C. §§ 1331 and 1338(a).

7. This Court has supplemental jurisdiction over ScaleMP's state law claims pursuant to 28 U.S.C. § 1367 because the claims are so related to the federal claims that they form part of the same case or controversy under Article III of the United States Constitution.

8. This Court has personal jurisdiction over TidalScale because TidalScale's
headquarters and principal place of business in located the State of California, and because the
claims at issue in this case arise out of its conduct in the State of California.

9. This Court has personal jurisdiction over Defendant Nassi because, on
information and belief, Defendant Nassi resides and works in the State of California, and because
the claims at issue in this case arise out of his conduct in the State of California.

10. This Court has personal jurisdiction over Defendant Reed because, on information and belief, Defendant Reed directed his tortious and other unlawful conduct described in this complaint to the State of California, and because the claims at issue in this case arise out of his conduct in the State of California. As described in greater detail below, Defendant Reed-while employed in the State of California at SAP AG and/or at one of its subsidiaries ("SAP")participated in a confidential, in-person "deep-dive" session with ScaleMP in the State of California during which ScaleMP presented to Defendant Reed and others at SAP a wide variety of ScaleMP's highly sensitive and proprietary information that had never previously been disclosed to the public. Defendant Reed subsequently gained access to additional confidential, highly sensitive and proprietary information from ScaleMP through his role at SAP. Defendant Reed thereafter left SAP and joined TidalScale, which is headquartered in the State of California. On information and belief, Defendant Reed unlawfully used ScaleMP's confidential, highly sensitive and proprietary information to develop the Accused Products described below. On information and belief, Defendant Reed worked primarily with others at TidalScale's headquarters in the State of California to develop the Accused Products. On information and belief, Defendant Reed identified himself in official business correspondence as "David Reed, Ph.D., Senior Vice President, SAP Chief Scientist Group, SAP Labs, LLC, 3410 Hillview Ave, Palo Alto, CA 94304." On information and belief, Defendant Reed and the other Defendantsboth of whom are domiciled in the State of California—began marketing, selling, and publicly demonstrating the Accused Products in 2016. Defendant Reed has thus purposefully availed himself of the benefits and protections of the State of California's laws and of the privilege of conducting activities in this State. In addition, the claims in this complaint arise out of Defendant Reed's conduct in the State of California.

COMPLAINT

11. Venue is proper in this federal judicial district pursuant to 28 U.S.C. § 1400(b) 2 because Defendant TidalScale is headquartered and therefore resides in this judicial district; 3 because, on information and belief, Defendant Nassi resides and works in this judicial district; because, on information and belief, Defendant Reed is employed by a company headquartered in 4 this judicial district and spends time physically present in this judicial district as part of his 5 employment; and because, as to all Defendants, a substantial part of the events or omissions 6 giving rise to the claims occurred in this judicial district.

FACTUAL ALLEGATIONS

12. ScaleMP is an industry leader in virtualization for in-memory high-end computing and a pioneer in developing technologies enabling the integration of multiple processors and memories into shared-memory computers. Among other innovations, ScaleMP developed the first virtualization program in which a single virtual computer aggregates numerous separate and independent computers consisting of processors and memories. These inventions dramatically reduce the cost and complexity of using large computer servers, including those optimized for mission critical and cloud environments.

13. The roots of ScaleMP's innovations lie in research conducted by its CEO and founder, Shai Fultheim, a veteran of the intelligence service of the Israel Defense Forces. In the early 2000's, Mr. Fultheim and his co-inventors, Herb Zlotogorski and Yaniv Romem, came to understand that the proliferation of cheap, small personal computers in the 1990's, mostly operating on Intel's X86 processing platform, created serious challenges and opportunities for managing their computing and memory capacities, challenges and opportunities that intensified in the late 1990's with increasing reliance on servers and, later, server farms. They recognized the missing link involved aggregating many smaller computers into a single large one to reduce the cost and time necessary to manage them. They also appreciated the opportunity to optimize the use of computing resources, which could vary wildly between peak and normal usage. In addition, they understood the limitations in the virtualization state of the art, including challenges

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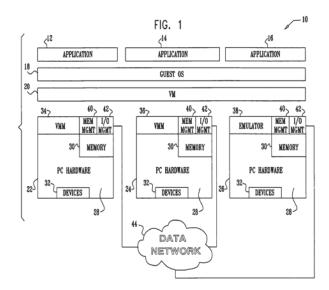
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COMPLAINT

in maintaining processor performance, sufficiently rapid communication between computers, and scalability.

14. The Patents-in-Suit, which resulted from their collaboration, claim and disclose software systems that aggregate processors and memory from multiple physical computers, operating separately and independently, into a single virtual machine. In certain embodiments of the invention, the virtual machine is shared between multiple virtual machine implementers, is run by a single guest operating system, and communicates with the physical computing resources using their respective input/output devices. In another aspect of the inventions in the Patents-in-Suit, the virtual machine presents the guest operating system with a single coherent shared memory using the physical memory from the physical computing nodes and the virtual machine implementer is configured to migrate a segment of the shared memory from one node to another. Figure 1 of the '801 Patent is illustrative:



15. The inventions in the Patents-in-Suit have resulted in a reduction in system management cost and complexity, a reduction in the cost of operating system licenses, a simplified operating environment enabling programs to operate in parallel without the need for an additional message-passing layer, and the ability to seamlessly use all system resources without modifying the operating system or application code. ScaleMP's inventions enable the

COMPLAINT

transparent use of processors and memory on multiple component machines, unaltered programs
and operating systems to run utilizing resources, and distributed programs to run in processes. In
addition, ScaleMP's inventions reduce the time to market for superior commodity processor
technology to find its way into multi-processor servers, dramatically lower the cost of designing,
creating, procuring, and deploying multi-processor servers, and enable the use of existing
software assets without requiring intrusive changes such as recompilation and operating system
modifications.

16. ScaleMP has partnered with numerous major computer manufacturers and OEMs,
including Dell, Hewlett-Packard, IBM, Fujitsu, and Hitachi, to deploy the inventions in the
Patents-in-Suit on thousands of servers around the world. The inventions have been used by
hundreds of companies and deployed on more than 8,000 computers across more than 37
countries. In September 2017, Lenovo introduced its Scalable Solution for SAP's HANA data
platform powered by ScaleMP's innovations, and in October 2017, Intel announced its new
Optane line of processors would include ScaleMP's software solution.

17. In addition to the inventions in the Patents-in-Suit, ScaleMP has developed highly sensitive, proprietary methods of efficiently and effectively implementing the inventions, including in the areas of memory and processor migration, protocol tracing, cache line granularity, memory region permissions, integration with specific operating systems, the identification of system-appropriate shared memory applications, run-time decisions related to remote code execution (based on resource locality), and application tuning. ScaleMP has also developed highly sensitive, proprietary business practices, including pricing and customer lists, product discount programs, and sales and marketing strategies. This highly sensitive information provides ScaleMP with a substantial competitive advantage in the market for virtualization for in-memory high-end computing. This information is maintained in strict confidence by ScaleMP and has never been revealed publicly by ScaleMP. 14

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THE ORIGINS OF THE ACCUSED PRODUCTS

18. ScaleMP filed the application that would mature into the '801 Patent on April 21,
2004, claiming priority to two provisional applications filed on September 2, 2003 and August
22, 2003. The application published on February 17, 2005.

19. On August 17, 2010, Nir Paikowsky, ScaleMP's Vice President of Services, met for the first time with Defendant Nassi, then the Executive Vice President and Chief Scientist of SAP and currently the Founder, Chairman of the Board, and Chief Technical Officer of TidalScale. The next day, Mr. Paikowsky sent Defendant Nassi an email enclosing a PowerPoint presentation about ScaleMP's technology. Shortly thereafter, on information and belief, Defendant Nassi took steps toward acquiring a ScaleMP software system through a reseller.

20. On October 25, 2010, Mr. Fultheim met with Defendant Nassi and Defendant Nassi's SAP group to discuss collaboration between ScaleMP and SAP. Defendant Nassi expressed SAP's intention to use a "scale-up" system for its future HANA data platform and expressed strong interest in deploying a ScaleMP system. Shortly thereafter SAP decided to move forward with purchasing a ScaleMP system with five nodes, each of which having four processors.

17 21. In December 2010, Defendant Reed, then a Senior Vice President at SAP in
18 Defendant Nassi's group and currently Chief Scientist at TidalScale, began testing the ScaleMP
19 system that had been newly deployed on SAP's platform, along with other members of
20 Defendant Nassi's group.

22. On December 31, 2010, SAP signed a non-disclosure agreement with ScaleMP ("the NDA," attached hereto as Exhibit D) in connection with the evaluation of ScaleMP's system by Defendant Nassi, Defendant Reed, and their group.

24 23. According to the NDA, SAP and its "Representatives," which the NDA defined to
25 include "employees of SAP AG and those entities directly or indirectly owned by SAP AG,"
26 agreed not to disclose any confidential information they received from ScaleMP during their
27 discussions, including "product offerings, content partners, product pricing, product availability,

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1 technical drawings, algorithms, processes, ideas, techniques, formulas, data, schematics, trade 2 secrets, know-how, improvements, inventions (whether patentable or not), marketing plans, 3 forecasts, and strategies." (Ex. D at 1.)

24. SAP agreed to "take all reasonable steps" to keep this information strictly confidential, not to "disclose or reveal any Confidential Information to any person other than its Representatives who are actively and directly participating in the Evaluation or who otherwise need to know the Confidential Information for the purposes of the Evaluation," not to "use Confidential Information for any purpose other than in connection with the Evaluation," and not to disclose to anyone outside of the evaluation "any information about the Evaluation, or the terms or conditions or any other facts relating thereto, including, without limitation, the fact that discussions are taking place with respect thereto or the status thereof." (Id.)

25. On January 1, 2011, Defendant Reed reported that "[i]n general, it seems that the system seems to be functional as expected."

14 26. On January 10-11, 2011, with the NDA in place, ScaleMP engaged in an inperson "deep-dive" session in this judicial district in which Defendant Nassi, Defendant Reed, 15 16 and others on their team participated. During this deep-dive session, and at other times during 17 the parties' discussions, Mr. Fultheim and others at ScaleMP presented to Defendant Nassi, 18 Defendant Reed, and others on their team, in visual, written, and oral form, a wide variety of 19 highly sensitive and proprietary information that had never previously been disclosed to the 20 public. This information included methods of efficiently and effectively implementing the inventions, such as in the areas of memory and processor migration; protocol tracing, cache line 22 granularity, memory region permissions, integration with specific operating systems, the 23 identification of system-appropriate shared memory applications, run-time decisions related to 24 remote code execution (based on resource locality), and application tuning. This information 25 also included ScaleMP's highly sensitive pricing and customer lists, product discount programs, 26 and sales and marketing strategies. ScaleMP and Defendant Reed subsequently exchanged hundreds of emails containing ScaleMP's highly sensitive information.

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27. In addition, on or around January or February 2011, SAP agreed to ScaleMP's End User License Agreement ("EULA," attached hereto as Exhibit E), which accompanies the installation of all ScaleMP software systems.

28. The EULA defined as a "Licensed Work" ScaleMP's "Software, enhancements, translations, derivatives, updates, bug fixes or improvements and related user documentation related thereto." Under the terms of the EULA, SAP acknowledged that the Licensed Work "contain[ed] substantial trade secrets of ScaleMP" and undertook to "employ reasonable security precautions to maintain the confidentiality of such trade secrets" and to "prevent disclosure or dissemination of trade secrets embodied therein to any person, firm, organization, or employee, except as necessary to exercise the rights granted to Licensee hereunder." (Ex. E.)

29. In addition, SAP undertook not to "directly or indirectly, 'unlock,' decompile, modify or reverse-assemble the binary or object code portions or versions of the Licensed Work, as the terms are generally used in the trade," to "offer third parties any services, whether for a fee or for no cost, that are based on or related to Licensee's use of the Licensed Work," or to "directly or indirectly, copy, market, distribute, sublicense, lease, encumber or otherwise transfer or attempt to transfer the Licensed Work or any portion thereof, or permit any third party to use or have access to the Licensed Work." (*Id.*)

30. On February 8, 2011, Defendant Nassi presented the project's status at the Hypertransport Conference. In that presentation, he praised the concept of "coherent shared memory" and included the following graphic:

> Software Approaches **Operating System** Aggregation Virtualization Layer Memor Memor Memory Caches CPUs Caches CPUs Caches CPUs I/O 1/0 I/O t or InfiniBar Hardware Cluster Hardware approach is replicated in software Software aggregates the compute, memory,

and I/O capabilities of each system and presents a unified virtual system to both the OS and the applications running above the OS via a software interception engine

31. On March 16, 2011, Defendant Nassi met with Dan Barnea, ScaleMP's Board Chairman, to discuss forming a strategic relationship between SAP and ScaleMP. Subsequently the parties exchanged additional business and technical information in writing and verbally, including the status of ScaleMP's patent applications.

18 32. On May 9, 2011, Paul Hofmann, a vice president of research and development in 19 Defendant Nassi's group at SAP, presented the project at a conference on New Technologies for 20 the Sustainable Enterprise, in which he acknowledged ScaleMP's contributions to "Scalable coherent shared memory" in SAP's new Big Iron deployment.

33. On September 27, 2011, Defendant Nassi announced he would be leaving SAP after October 28, 2011.

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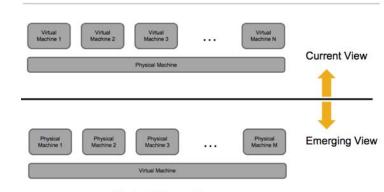
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COMPLAINT

34. On October 24, 2011, while still at SAP, Defendant Nassi presented the project at the High Performance Transaction Systems Conference, again praising ScaleMP's contributions and using the following graphic:

A simplified programming model and landscape



(Single OS instance)

35. On October 26, 2011, Mr. Fultheim and Defendant Nassi discussed collaboration over dinner, and Defendant Nassi suggested joining ScaleMP as Chief Technology Officer or a board advisor. Ultimately Defendant Nassi did not join ScaleMP.

36. At various times in 2012, Defendant Nassi delivered a presentation on enterprise supercomputers at the University of California, Santa Cruz in which he again praised ScaleMP's contributions to "[s]calable coherent shared memory" and presented the same graphic above.

37. In March 2012, TidalScale was formally incorporated.

38. In December 2012, while still at SAP, Defendant Reed requested that ScaleMP extend its license agreement with SAP and noted that SAP was extending its application of ScaleMP's platform to research into big data and machine learning. In subsequent years, SAP would continually purchase ScaleMP products, renew its support agreement with ScaleMP eleven times, and certify ScaleMP's software for use on SAP HANA.

39. In January 2013, Defendant Reed requested further sensitive pricing and technical information from ScaleMP. Shortly thereafter, Defendant Reed departed SAP.

40. On March 18, 2013, Mr. Fultheim, having heard rumors about a company called TidalScale, asked Defendant Nassi about the company and how it might relate to ScaleMP. In

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response, Defendant Nassi wrote: "I haven't given it much thought, and I'm open to suggestions.
 Of course, I acknowledge ScaleMP's contributions to the state of the art, and say only good
 things when I talk about our joint experiences at SAP."

41. On August 16, 2013, Defendant Nassi called Mr. Fultheim to inform him he had raised money for TidalScale.

42. On information and belief, at some point thereafter, Defendant Reed joined Defendant Nassi at TidalScale and became the company's Chief Scientist. On various occasions between 2013 and 2017, Defendant Reed participated in numerous conferences and industry meetings in the State of California, including as TidalScale's Chief Scientist.

43. As set forth in greater detail below, on information and belief, at some point in 2016, TidalScale began marketing, selling, and publicly demonstrating the Accused Products.

THE ACCUSED PRODUCTS

44. On information and belief, TidalScale, under the leadership of Defendants Nassi and Reed, uses, makes, sells, offers to sell, and/or imports into the United States a suite of software products, including the TidalScale Software-Defined Server platform, the TidalScale HyperKernel, and the TidalScale Hypervisor Technology (collectively "the Accused Products"), induces others to make, use, sell, offer to sell, and/or import into the United States the Accused Products, and/or contributes to the making, using, selling, offering to sell, and/or importing into the United States by others of the Accused Products. Representative examples of the Accused Products, a complete list of which will be identified and provided as required during discovery, and a short summary of some of the ways they infringe are set forth below. ScaleMP's investigation and identification of the Accused Products is ongoing and will be expanded in discovery beyond the exemplars identified herein. The description of infringement in connection with these exemplars is also not intended to be limiting, but merely a summary that may omit certain detail to be provided in the course of litigation.

26 45. On information and belief, and on the basis of information available on
27 TidalScale's website, in its user manuals, and in other publicly available presentations, YouTube

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videos, and marketing collateral, the Accused Products meet the limitations of many of the claims of the Patents-in-Suit. 2

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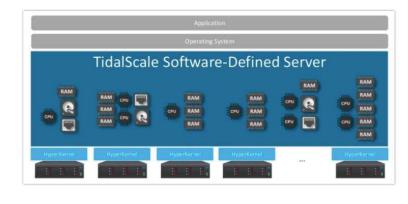
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46. As a general matter, according to TidalScale's own description of the Accused Products, "[t]he HyperKernel binds multiple physical computers into a single, coherent virtual system that allows you to run an unmodified guest operating system, with no changes to your existing applications required."

> TidalScale HyperKernel. The key to right-sizing servers on the fly is TidalScale's HyperKernel software. The HyperKernel binds multiple physical computers into a single, coherent virtual system that allows you to run an unmodified guest operating system, with no changes to your existing applications required. All the resources associated with the aggregated systems - memory, cores, storage and I/O are available to you and your application. You can configure them as one system or several.

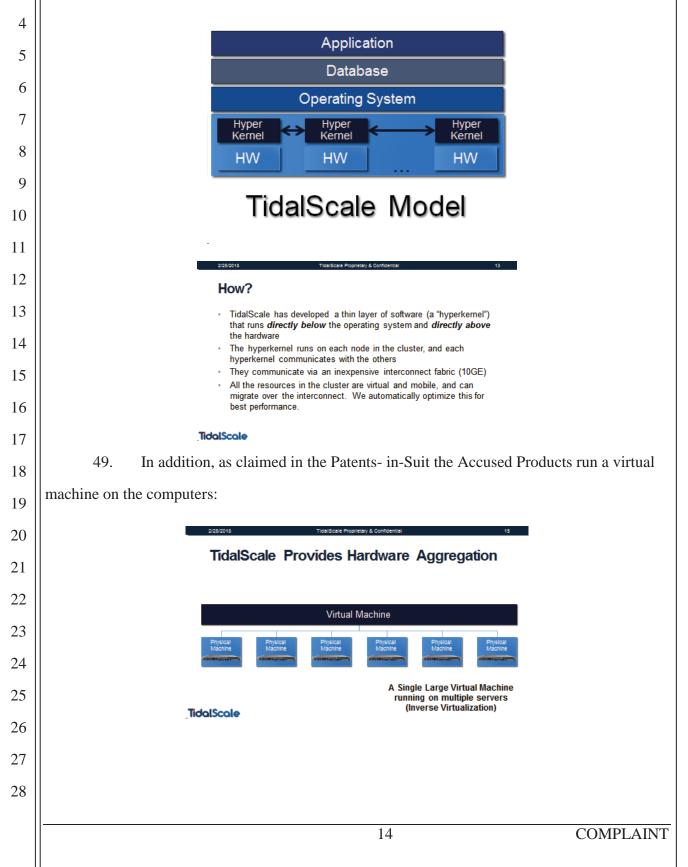
47. Specifically, as claimed in the Patents-in-Suit, the Accused Products include software that runs on a plurality of inter-communicating computers with hardware resources comprising memory and input/output devices:



48. In the Accused Products, as claimed in the Patents-in-Suit, multiple virtual machine implementers, which TidalScale labels "HyperKernels," run separately and independently on each computer:

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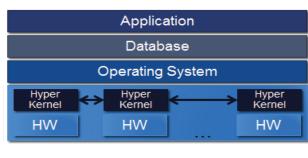
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50. Moreover, as claimed in the Patents-in-Suit, the virtual machine in the Accused Products is shared between the virtual machine implementers using their input/output devices to intercommunicate:

	2/25/2018 Tidal Scale Proprietary & Co	ntidential 20	
4	"TS-Micro"	~\$36K2013	
5	SYSTEM VIEW		
6 7	60 cores (Ivy Bridge), 120 hyperthreads 1.2 TB main memory 12 TB disk storage		
8	12 1Gb Ethernet 6 10Gb Ethernet 1 managed 10GbE switch 1 management console		
9	3 DVD-ROM		
10	TidalScale		
11	But unlike traditional virtualization, whe	ere multiple virtual machines	
	run on a single physical server, TidalSc		
12	machine across multiple physical serve Server appears as a single system, eve		
13	of dozens of individual servers. This is	because the TidalScale	
14	HyperKernel couples those physical ma Ethernet network that acts as the reso		
15	to behave like a single large server.		
16			
17	51. Furthermore, in the Accused Products	s, as claimed in the Paten	ts-in-Suit, a guest
18	operating system runs over the shared virtual machin	ie:	
19			
	Application Operating System		
20 21	TidalScale Software-D	efined Server	
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24	HyperXernel HyperXernel HyperXernel HyperXernel H	perKenel HyperKernel	
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TidalScale Model

52. Additionally, in accordance with other features claimed in the Patents-in-Suit, the Accused Products include software configured to run on computing nodes that include memory, a network interface device, and a CPU and to run a guest operating system on a shared virtual machine with instructions distributed for execution on the computing nodes as though the system were a single symmetric multiprocessing machine with shared memory:

> But unlike traditional virtualization, where multiple virtual machines run on a single physical server, TidalScale provides a single virtual machine across multiple physical servers. Each Software-Defined Server appears as a single system, even though it may be comprised of dozens of individual servers. This is because the TidalScale HyperKernel couples those physical machines via a standard 10Gb Ethernet network that acts as the resource bus, causing the servers to behave like a single large server.

53. In addition, in accordance with yet other features claimed in the Patents-in-Suit, the Accused Products include software that comprising a virtual machine implementer than is configured to cause a migration of a segment of memory from one computing node to another:

Self-optimizes. HyperKernel uses patented machine learning technology to automatically migrate memory pages and virtual CPUs to where the application needs them to optimize performance. 54. In addition, on information and belief, the Accused Products contain, embody and were developed using ScaleMP's proprietary and highly sensitive information, documents, and other materials relating to its methods of efficiently and effectively implementing the invention, including in the areas of memory and processor migration, protocol tracing, cache line granularity, memory region permissions, integration with specific operating systems, the identification of system-appropriate shared memory applications, run-time decisions related to remote code execution (based on resource locality), and application tuning. On information and belief, during the development of the Accused Product, Defendants Nassi and Reed disclosed ScaleMP's propriety and highly sensitive information to the others in the development team of the Defendant TidalScale in the State of California.

55. On information and belief, Defendants began marketing, selling, and publicly demonstrating the Accused Products in 2016. On information and belief, Defendant TidalScale announced its first industry partnership—a configuration of its software on IBM servers—in June 2016. On subsequent occasions between June 2016 and the present time, Defendant TidalScale announced sales of the Accused Products to and industry partnerships with companies such as Ubuntu, TIBCO, OrionVM, Oracle, and NCS.

56. Furthermore, on information and belief, Defendants have further developed the Accused Products since they first began selling and marketing them. Subsequent acts of developing, selling, marketing, and/or publicly demonstrating the Accused Products by Defendants constitute unauthorized uses and/or disclosures of ScaleMP's proprietary and highly sensitive technical information.

57. In addition, on information and belief, Defendants Nassi and Reed or others at their direction at Defendant TidalScale unlocked, decompiled, modified, reverse-assembled, copied, marketed, distributed, sublicensed, leased, encumbered or otherwise transferred or attempted to transfer ScaleMP's Licensed Work during the development of the Accused Products.

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58. Moreover, on information and belief, since June 2016, TidalScale has been selling and marketing the Accused Products in accordance with and using ScaleMP's proprietary and highly sensitive pricing and customer lists, product discount programs, and sales and marketing strategies. Acts of selling or marketing the Accused Products by Defendants constitute unauthorized uses of ScaleMP's proprietary and highly sensitive pricing, sales, and marketing information, in addition to the above-described technical trade secrets.

COUNT ONE: INFRINGEMENT OF THE '004 PATENT (As to Defendant TidalScale)

59. U.S. Patent No. 8,544,004 (the "'004 patent"), entitled "Cluster-Based Operating System-Agnostic Virtual Computing System," was duly and legally issued by the United States Patent and Trademark Office on September 24, 2013 after a full and fair examination. ScaleMP owns the '004 patent by assignment. The named inventors on the '004 patent are Shai Fultheim, Herb Zlotogorski, and Yaniv Romem. A true and correct copy of the '004 patent is attached hereto as Exhibit A.

60. The '004 patent is valid and enforceable. TidalScale does not have a license to practice any of the inventions claimed in the '004 patent.

61. TidalScale directly infringes at least claim 1 of the '004 patent by making, using, selling, offering to sell, and/or importing the Accused Products, which meet every limitation of at least claim 1 of the '004 patent.

62. In addition, TidalScale has actively induced and continues to actively induce others to directly infringe the '004 patent by making, using, selling, offering to sell, and/or importing the Accused Products. Moreover, TidalScale has known of and/or should have known of the '004 patent, at least by the date of the patent's issuance, such that TidalScale knew and should have known that it was and would be inducing infringement. To the extent TidalScale was not previously aware of the '004 patent, it is aware of it as of the filing of this complaint.

63. Moreover, on information and belief, TidalScale has contributed to the infringement of the '004 patent by the Accused Products. On information and belief, TidalScale

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has known and continues to know that the Accused Products include components that work in concert to perform specific, intended functions. Such specific, intended functions, carried out by these components, are a material part of the inventions of the '004 patent and are not staple articles of commerce suitable for substantial non-infringing use. To the extent TidalScale was not previously aware of the '004 patent, it is aware of it as of the filing of this complaint.

64. 6 In addition, Defendant Nassi, TidalScale's Founder, Chairman, Chief Technical Officer, and Chief Executive Officer from 2012-16, and Defendant Reed, its Chief Scientist, have been intimately familiar with the claimed inventions since at least as early as 2011 when they learned about ScaleMP's technology under non-disclosure agreements when they installed ScaleMP's software on SAP's systems in connection with potential strategic business ventures. Thus, on information and belief, from at least as early as the issuance of the '004 Patent, and in no event later than the filing of this complaint, TidalScale has infringed, induced others to infringe, and/or contributed to the infringement by others of the Accused Products with knowledge of and/or willful blindness to the fact that such use infringes the '004 patent, has disregarded an objectively high likelihood of infringement of the '004 patent, and has acted, and continues to act, willfully, wantonly, and in deliberate disregard of ScaleMP's rights.

65. As the direct and proximate result of TidalScale's conduct, ScaleMP has suffered and, if TidalScale's conduct is not stopped, will continue to suffer, severe competitive harm, irreparable injury, and significant damages, in an amount to be proven at trial. Because ScaleMP's remedy at law is inadequate, ScaleMP seeks, in addition to damages, injunctive relief. ScaleMP's business operates in a competitive market and will continue suffering irreparable harm absent injunctive relief.

66. ScaleMP is entitled to injunctive relief and damages of no less than a reasonable royalty in accordance with 35 U.S.C. §§ 271, 281, 283, and 284.

67. TidalScale's conduct, including its infringement of the '004 patent, is exceptional and entitles ScaleMP to attorney fees and costs under 35 U.S.C. § 285.

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68. From at least as early as the filing of this complaint, TidalScale has been on notice of its infringement of the '004 patent, and its infringement has been and continues to be willful and egregious, entitling ScaleMP to enhanced damages in accordance with 35 U.S.C. § 284.

COUNT TWO: INFRINGEMENT OF THE '692 PATENT (As to Defendant TidalScale)

69. U.S. Patent No. 8,832,692 (the "'692 patent"), entitled "Cluster-Based Operating System-Agnostic Virtual Computing System," was duly and legally issued by the United States Patent and Trademark Office on September 9, 2014 after a full and fair examination. ScaleMP owns the '692 patent by assignment. The named inventors on the '692 patent are Shai Fultheim, Herb Zlotogorski, and Yaniv Romem. A true and correct copy of the '692 patent is attached hereto as Exhibit B.

70. The '692 patent is valid and enforceable. TidalScale does not have a license to practice any of the inventions claimed in the '692 patent.

71. TidalScale directly infringes at least claim 1 of the '692 patent by making, using, selling, offering to sell, and/or importing the Accused Products, which meet every limitation of at least claim 1 of the '692 patent.

72. In addition, TidalScale has actively induced and continues to actively induce others to directly infringe the '692 patent by making, using, selling, offering to sell, and/or importing the Accused Products. Moreover, TidalScale has known of and/or should have known of the '692 patent, at least by the date of the patent's issuance, such that TidalScale knew and should have known that it was and would be inducing infringement. To the extent TidalScale was not previously aware of the '692 patent, it is aware of it as of the filing of this complaint.

73. Moreover, on information and belief, TidalScale has contributed to the infringement of the '692 patent by the Accused Products. On information and belief, TidalScale has known and continues to know that the Accused Products include components that work in concert to perform specific, intended functions. Such specific, intended functions, carried out by these components, are a material part of the inventions of the '692 patent and are not staple

articles of commerce suitable for substantial non-infringing use. To the extent TidalScale was not previously aware of the '692 patent, it is aware of it as of the filing of this complaint.

74. In addition, Defendant Nassi, TidalScale's Founder, Chairman, Chief Technical Officer, and Chief Executive Officer from 2012-16, and Defendant Reed, its Chief Scientist, have been intimately familiar with the claimed inventions since at least as early as 2011 when they learned about ScaleMP's technology under non-disclosure agreements when they installed ScaleMP's software on SAP's systems in connection with potential strategic business ventures. Thus, on information and belief, from at least as early as the issuance of the '692 Patent, and in no event later than the filing of this complaint, TidalScale has infringed, induced others to infringe, and/or contributed to the infringement by others of the Accused Products with knowledge of and/or willful blindness to the fact that such use infringes the '692 patent, has disregarded an objectively high likelihood of infringement of the '692 patent, and has acted, and continues to act, willfully, wantonly, and in deliberate disregard of ScaleMP's rights.

75. As the direct and proximate result of TidalScale's conduct, ScaleMP has suffered and, if TidalScale's conduct is not stopped, will continue to suffer, severe competitive harm, irreparable injury, and significant damages, in an amount to be proven at trial. Because ScaleMP's remedy at law is inadequate, ScaleMP seeks, in addition to damages, injunctive relief. ScaleMP's business operates in a competitive market and will continue suffering irreparable harm absent injunctive relief.

76. ScaleMP is entitled to injunctive relief and damages of no less than a reasonable royalty in accordance with 35 U.S.C. §§ 271, 281, 283, and 284.

77. TidalScale's conduct, including its infringement of the '692 patent, is exceptional and entitles ScaleMP to attorney fees and costs under 35 U.S.C. § 285.

78. From at least as early as the filing of this complaint, TidalScale has been on notice of its infringement of the '692 patent, and its infringement has been and continues to be willful and egregious, entitling ScaleMP to enhanced damages in accordance with 35 U.S.C. § 284.

COUNT THREE: INFRINGEMENT OF THE '801 PATENT (As to Defendant TidalScale)

79. U.S. Patent No. 9,020,801 ("the '801 patent"), entitled "Cluster-Based Operating System-Agnostic Virtual Computing System," was duly and legally issued by the United States Patent and Trademark Office on April 28, 2015 after a full and fair examination. ScaleMP owns the '801 patent by assignment. The named inventors on the '801 patent are Shai Fultheim, Herb Zlotogorski, and Yaniv Romem. A true and correct copy of the '801 patent is attached hereto as Exhibit C.

80. The '801 patent is valid and enforceable. TidalScale does not have a license to practice any of the inventions claimed in the '801 patent.

81. TidalScale directly infringes at least claim 1 of the '801 patent by making, using, selling, offering to sell, and/or importing the Accused Products, which meet every limitation of at least claim 1 of the '801 patent.

82. In addition, TidalScale has actively induced and continues to actively induce others to directly infringe the '801 patent by making, using, selling, offering to sell, and/or importing the Accused Products. Moreover, TidalScale has known of and/or should have known of the '801 patent, at least by the date of the patent's issuance, such that TidalScale knew and should have known that it was and would be inducing infringement. To the extent TidalScale was not previously aware of the '801 patent, it is aware of it as of the filing of this complaint.

83. Moreover, on information and belief, TidalScale has contributed to the infringement of the '801 patent by the Accused Products. On information and belief, TidalScale has known and continues to know that the Accused Products include components that work in concert to perform specific, intended functions. Such specific, intended functions, carried out by these components, are a material part of the inventions of the '801 patent and are not staple articles of commerce suitable for substantial non-infringing use. To the extent TidalScale was not previously aware of the '801 patent, it is aware of it as of the filing of this complaint.

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84. In addition, Defendant Nassi, TidalScale's Founder, Chairman, Chief Technical Officer, and Chief Executive Officer from 2012-16, and Defendant Reed, its Chief Scientist, have been intimately familiar with the claimed inventions since at least as early as 2011 when they learned about ScaleMP's technology under non-disclosure agreements when they installed ScaleMP's software on SAP's systems in connection with potential strategic business ventures. Thus, on information and belief, from at least as early as the issuance of the '801 Patent, and in no event later than the filing of this complaint, TidalScale has infringed, induced others to infringe, and/or contributed to the infringement by others of the Accused Products with knowledge of and/or willful blindness to the fact that such use infringes the '801 patent, has disregarded an objectively high likelihood of infringement of the '801 patent, and has acted, and continues to act, willfully, wantonly, and in deliberate disregard of ScaleMP's rights.

85. As the direct and proximate result of TidalScale's conduct, ScaleMP has suffered and, if TidalScale's conduct is not stopped, will continue to suffer, severe competitive harm, irreparable injury, and significant damages, in an amount to be proven at trial. Because ScaleMP's remedy at law is inadequate, ScaleMP seeks, in addition to damages, injunctive relief. ScaleMP's business operates in a competitive market and will continue suffering irreparable harm absent injunctive relief.

86. ScaleMP is entitled to injunctive relief and damages of no less than a reasonable royalty in accordance with 35 U.S.C. §§ 271, 281, 283, and 284.

87. TidalScale's conduct, including its infringement of the '801 patent, is exceptional and entitles ScaleMP to attorney fees and costs under 35 U.S.C. § 285.

88. From at least as early as the filing of this complaint, TidalScale has been on notice of its infringement of the '801 patent, and its infringement has been and continues to be willful and egregious, entitling ScaleMP to enhanced damages in accordance with 35 U.S.C. § 284.

COUNT FOUR: VIOLATION OF THE DEFEND TRADE SECRET ACT, 18 U.S.C. § 1836 *ET SEQ*.

89. ScaleMP's proprietary and highly sensitive information, documents, and other materials relating to its methods of efficiently and effectively implementing the invention—including in the areas of memory and processor migration, protocol tracing, cache line granularity, memory region permissions, integration with specific operating systems, the identification of system-appropriate shared memory applications, run-time decisions related to remote code execution (based on resource locality), and application tuning, as well as its pricing and customer lists, product discount programs, and sales and marketing strategies individually and collectively constitute trade secrets under the Defend Trade Secrets Act, 18 U.S.C. § 1836 *et seq.*

90. ScaleMP's trade secrets derive independent economic value, actual or potential, from not being generally known to, and not being readily ascertainable through proper means by, another person who can obtain economic value from the disclosure or use of the information.

91. ScaleMP has taken reasonable steps to maintain the confidentiality of its trade secrets, including through contractual restrictions and electronic and physical security systems.

92. On information and belief, Defendants have acquired, disclosed, and/or used ScaleMP's trade secrets under circumstances that constitute misappropriation of trade secrets in violation of 18 U.S.C. § 1836 *et seq.*

93. On information and belief, Defendants have misappropriated ScaleMP's trade secrets after enactment of the Defend Trade Secrets Act of 2016 on May 11, 2016. Since May 11, 2016, Defendants have developed, sold, marketed, and publicly demonstrated the Accused Products, thereby using and/or disclosing ScaleMP's trade secrets without ScaleMP's consent.

94. ScaleMP first had reason to believe that Defendants had misappropriated its trade secrets on or about 2016 when, on information and belief, Defendants began selling, marketing, and publicly demonstrating the Accused Products. Though only limited information about the Accused Products was available to ScaleMP at that time, and while Defendants' misconduct

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became evident only through information that became available later, ScaleMP could not by the
 exercise of reasonable diligence have discovered Defendants' misappropriation of its trade
 secrets any earlier than 2016.

95. The trade secrets above are used and intended to be used in interstate commerce.
96. Pursuant to 18 U.S.C. § 1836(b)(3)(A), ScaleMP is entitled to preliminary and permanent injunctive relief, including injunctions enjoining Defendants from actual and threatened misappropriation and unlawful use of ScaleMP's trade secrets.

97. Pursuant to 18 U.S.C. § 1836(b)(3)(B)(i)(I) and (II), ScaleMP is further entitled to damages adequate to compensate it for both the actual loss and unjust enrichment caused by Defendants' misappropriation and unlawful use of ScaleMP's trade secrets.

98. In addition, pursuant to 18 U.S.C. § 1836(b)(3)(B)(ii), ScaleMP is entitled to damages caused by the misappropriation measured by imposition of liability for a reasonable royalty for Defendants' unauthorized disclosure or use of ScaleMP's trade secrets.

99. Moreover, pursuant to 18 U.S.C. § 1836(b)(3)(C), ScaleMP is entitled to exemplary damages because Defendants' misappropriation of ScaleMP's trade secrets was willful and malicious.

100. Furthermore, pursuant to 18 U.S.C. § 1836(b)(3)(D), ScaleMP is entitled to attorney fees because Defendants' misappropriation of ScaleMP's trade secrets was willful and malicious.

COUNT FIVE: VIOLATION OF THE CALIFORNIA UNIFORM TRADE SECRET ACT, CAL. CIV. CODE § 3426 ET SEQ.

101. ScaleMP's proprietary and highly sensitive information, documents, and other materials relating to its methods of efficiently and effectively implementing the invention, including in the areas of memory and processor migration, protocol tracing, cache line granularity, memory region permissions, integration with specific operating systems, the identification of system-appropriate shared memory applications, run-time decisions related to

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remote code execution (based on resource locality), and application tuning, as well as its pricing 2 and customer lists, product discount programs, and sales and marketing strategies individually 3 and collectively constitute trade secrets under the California Uniform Trade Secrets Act, Cal. Civ. Code. § 3426 et seq. ScaleMP's trade secrets derive independent economic value, actual or 4 potential, from not being generally known to the public or any other person who can obtain 5 economic value from the disclosure or use of the information. 6

102. ScaleMP has taken reasonable steps to maintain the confidentiality of its trade secrets, including through contractual restrictions and electronic and physical security systems.

9 103. On information and belief, Defendants have acquired, disclosed, and/or used ScaleMP's trade secrets under circumstances that constitute misappropriation of trade secrets in 10 violation of Cal. Civ. Code. § 3426 et seq.

104. Specifically, on information and belief, Defendants have misappropriated ScaleMP's trade secrets by developing, selling, marketing, and publicly demonstrating the Accused Products, thereby using and/or disclosing ScaleMP's trade secrets without ScaleMP's consent.

In addition, on information and belief, Defendants Reed and Nassi disclosed 105. ScaleMP's trade secrets to others at Defendant TidalScale during the development of the Accused Products.

106. As the direct and proximate result of Defendants' conduct, ScaleMP has suffered and, if the Defendants' conduct is not stopped, will continue to suffer, severe competitive harm, irreparable injury, and significant damages, in an amount to be proven at trial.

107. ScaleMP first had reason to believe that Defendants had misappropriated its trade secrets on or about 2016 when, on information and belief, Defendants began selling, marketing, and publicly demonstrating the Accused Products. Though only limited information about the Accused Products was available to ScaleMP at that time, and while Defendants' misconduct became evident only through information that became available later, ScaleMP could not by the

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1 exercise of reasonable diligence have discovered Defendants' misappropriation of its trade 2 secrets any earlier than 2016.

108. Pursuant to Cal. Civ. Code § 3426.3(a), ScaleMP is entitled to recover damages for the actual loss caused by Defendants' misappropriation of ScaleMP's trade secrets, and is also entitled to recover for unjust enrichment caused by said misappropriation that is not taken into account in computing damages for actual loss.

7 109. In the alternative, ScaleMP is entitled to a reasonable royalty pursuant to Cal. Civ. 8 Code § 3426.3(b) in the event neither damages nor unjust enrichment caused by 9 misappropriation are provable.

10 In addition, pursuant to Cal. Civ. Code § 3426.3(c), ScaleMP is entitled to 110. exemplary damages because Defendants' misappropriation of ScaleMP's trade secrets was willful and malicious. 12

111. Pursuant to Cal. Civ. Code § 3426.2(a), ScaleMP is entitled to injunctive relief, including injunctions enjoining Defendants from actual and threatened misappropriation and unlawful use of ScaleMP's trade secrets.

Furthermore, pursuant to Cal. Civ. Code § 3426.4, ScaleMP is entitled to attorney 112. fees and costs because TidalScale's misappropriation of ScaleMP's trade secrets was willful and malicious.

DEMAND FOR JURY TRIAL

ScaleMP hereby demands a jury trial on all issues triable to a jury.

PRAYER FOR RELIEF

WHEREFORE, ScaleMP respectfully prays for entry of judgment in its favor on each and every count recited above, including the following:

- That TidalScale has directly and indirectly infringed, and continue to infringe, one or a) more claims of the Patents-in-Suit;
- b) That TidalScale be ordered to provide an accounting;

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 c) That ScaleMP is entitled to, and should recover from TidalScale, all damages to which ScaleMP is entitled under 35 U.S.C. § 284, but in no event less than a reasonable royalty;

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- d) That TidalScale be permanently enjoined from further infringement of the Patents-in-Suit;
- e) That ScaleMP, as the prevailing party, shall recover from TidalScale all taxable costs of court;
- f) That ScaleMP shall recover from TidalScale all pre- and post-judgment interest on the damages award, calculated at the highest interest rates allowed by law;
- g) That TidalScale's conduct was willful and that ScaleMP should therefore recover treble damages, including attorney 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 ScaleMP shall therefore recover its attorney fees and other recoverable expenses, under 35 U.S.C. § 285;
- i) That Defendants have misappropriated ScaleMP's trade secrets or have otherwise violated the Defend Trade Secrets Act, 18 U.S.C. § 1836 *et seq.*, with respect to ScaleMP's trade secrets;
- j) That ScaleMP is entitled to, and should recover from Defendants, all damages adequate to compensate ScaleMP for both the actual loss and unjust enrichment caused by their misappropriation of ScaleMP's trade secrets and other violations of the Defend Trade Secrets Act, 18 U.S.C. § 1836(b)(3)(B)(i)(I) and (II);
- k) That ScaleMP is entitled to, and should recover from Defendants, damages of no less than a reasonable royalty for Defendants' misappropriation of ScaleMP's trade secrets and other violations of the Defend Trade Secrets Act, 18 U.S.C. § 1836(b)(3)(B)(ii).

 That Defendants' misappropriation of ScaleMP's trade secrets was willful and malicious and that ScaleMP should therefore recover exemplary damages, attorney fees and costs under the Defend Trade Secrets Act, 18 U.S.C. § 1836(b)(3)(C) and (D);

- m) That Defendants be permanently enjoined from further misappropriation, use, and/or disclosure of ScaleMP's trade secret, confidential and proprietary information and from other violations of the Defend Trade Secrets Act, 18 U.S.C. § 1836(b)(3)(A);
- n) That Defendants have misappropriated ScaleMP's trade secrets or have otherwise violated the California Uniform Trade Secrets Act, Cal. Civ. Code § 3426 *et seq.*, with respect to ScaleMP's trade secrets;
- o) That ScaleMP is entitled to, and should recover from Defendants, all damages adequate to compensate ScaleMP for the actual loss caused by their misappropriation of ScaleMP's trade secrets and other violations of the California Uniform Trade Secrets Act, Cal. Civ. Code § 3426.3(a);
- p) That ScaleMP is entitled to, and should recover from Defendants, the unjust enrichment caused by their misappropriation of ScaleMP's trade secrets and other violations of the California Uniform Trade Secrets Act, Cal. Civ. Code § 3426.3(a);
- q) That ScaleMP is entitled to, and should recover from Defendants, a reasonable royalty for Defendants' misappropriation of ScaleMP's trade secrets and other violations of the California Uniform Trade Secrets Act, Cal. Civ. Code § 3426.3(b);
- r) That Defendants' misappropriation of ScaleMP's trade secrets was willful and malicious and that ScaleMP should therefore recover exemplary damages, attorney fees and costs under the California Uniform Trade Secrets Act, Cal. Civ. Code § 3426.3(c) and § 3426.4;
- s) That Defendants be permanently enjoined from further misappropriation, use, and/or disclosure of ScaleMP's trade secret, confidential and proprietary information and from other violations of the California Uniform Trade Secrets Act, Cal. Civ. Code § 3426.2;

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1 2 3 4	t) u)	That Defendants return all of ScaleMP's trade secret, confidential, and proprietary information in their possession to ScaleMP; That ScaleMP shall recover from Defendants such other and further relief as the Court deems appropriate.		
5	Dated: A	ugust 6, 2018	Respectfully submitted,	
6		ugust 0, 2018		
7			/s/ Michael Ng	
8 9			Michael Ng (CA SBN 237915) Michael M. Rosen (CA SBN 2309	964)
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