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10 Attorneys for Plaintiffs
 11 *REALTIME DATA LLC d/b/a IXO*

12 **UNITED STATES DISTRICT COURT**
 13 **CENTRAL DISTRICT OF CALIFORNIA**
 14 **WESTERN DIVISION**

15 REALTIME DATA LLC d/b/a IXO,
 16 Plaintiff,
 17 v.
 18 INFRASCALE, INC.,
 19 Defendant.
 20
 21
 22

Case No. 2:19-cv-06160-DSF-AS

**FIRST AMENDED COMPLAINT
 FOR PATENT INFRINGEMENT
 AGAINST INFRASCALE, INC.**

JURY TRIAL DEMANDED

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1 This is an action for patent infringement arising under the Patent Laws of the
2 United States of America, 35 U.S.C. § 1 *et seq.* in which Plaintiff Realtime Data
3 LLC d/b/a IXO (“Plaintiff,” “Realtime,” or “IXO”) makes the following allegations
4 against Defendant Infrascala, Inc. (“Infrascala” or “Defendant”):

5 **PARTIES**

6 1. Realtime is a limited liability company organized under the laws of the
7 State of New York. Realtime has its principal place of business at 66 Palmer
8 Avenue, Suite 27, Bronxville, NY 10708. Since the 1990s, Realtime has researched
9 and developed specific solutions for data compression, including, for example, those
10 that increase the speeds at which data can be stored and accessed. As recognition of
11 its innovations rooted in this technological field, Realtime holds over 30 United
12 States patents and has numerous pending patent applications. Realtime has licensed
13 patents in this portfolio to many of the world’s leading technology companies. The
14 patents-in-suit relate to Realtime’s development of advanced systems and methods
15 for fast and efficient data compression using numerous innovative compression
16 techniques based on, for example, particular attributes of the data.

17 2. On information and belief, Infrascala is a California corporation with
18 its principal place of business at 999 N Pacific Coast Hwy. Suite 100, El Segundo,
19 California 90245. Infrascala can be served through its registered agent, Business
20 Filings Incorporated, 818 W 7th St. Ste. 930, Los Angeles, California 90017.

21 **JURISDICTION AND VENUE**

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

25 4. This Court has personal jurisdiction over Defendant Infrascala in this
26 action because Infrascala is incorporated in California and has committed acts within
27 the Central District of California giving rise to this action and has established
28 minimum contacts with this forum such that the exercise of jurisdiction over

1 testing of the Accused Instrumentalities, which constitute a computer implemented
2 method claimed by Claim 25 of the '728 Patent, comprising: analyzing, using a
3 processor, data within a data block to identify one or more parameters or attributes
4 of the data within the data block; determining, using the processor, whether to output
5 the data block in a received form or in a compressed form; and outputting, using the
6 processor, the data block in the received form or the compressed form based on the
7 determination, wherein the outputting the data block in the compressed form
8 comprises determining whether to compress the data block with content dependent
9 data compression based on the one or more parameters or attributes of the data within
10 the data block or to compress the data block with a single data compression encoder;
11 and wherein the analyzing of the data within the data block to identify the one or
12 more parameters or attributes of the data excludes analyzing based only on a
13 descriptor that is indicative of the one or more parameters or attributes of the data
14 within the data block. Upon information and belief, Infrascade uses the Accused
15 Instrumentalities, which are infringing systems, for its own internal non-testing
16 business purposes, while testing the Accused Instrumentalities, and while providing
17 technical support and repair services for the Accused Instrumentalities to
18 Infrascade's customers.

19 10. On information and belief, Infrascade has had knowledge of the '728
20 Patent since at least the filing of the original Complaint in this action, or shortly
21 thereafter, and on information and belief, Infrascade knew of the '728 Patent and
22 knew of its infringement, including by way of this lawsuit. By the time of trial,
23 Infrascade will have known and intended (since receiving such notice) that their
24 continued actions would actively induce and contribute to the infringement of the
25 claims of the '728 Patent.

26 11. Infrascade's affirmative acts of making, using, selling, offering for sale,
27 and/or importing the Accused Instrumentalities have induced and continue to induce
28 users of the Accused Instrumentalities to use the Accused Instrumentalities in their

1 normal and customary way to infringe the claims of the '728 Patent, knowing that
2 when the Accused Instrumentalities are used in their ordinary and customary
3 manner, such method constitute infringing communication method comprising:
4 analyzing, using a processor, data within a data block to identify one or more
5 parameters or attributes of the data within the data block; determining, using the
6 processor, whether to output the data block in a received form or in a compressed
7 form; and outputting, using the processor, the data block in the received form or the
8 compressed form based on the determination, wherein the outputting the data block
9 in the compressed form comprises determining whether to compress the data block
10 with content dependent data compression based on the one or more parameters or
11 attributes of the data within the data block or to compress the data block with a single
12 data compression encoder; and wherein the analyzing of the data within the data
13 block to identify the one or more parameters or attributes of the data excludes
14 analyzing based only on a descriptor that is indicative of the one or more parameters
15 or attributes of the data within the data block. For example, Infrascala explains to
16 customers the benefits of using the Accused Instrumentalities, such as by touting
17 their performance advantages: “[D]ata deduplication identifies duplicate data,
18 removing redundancies and reducing the amount of data transferred and stored. ...
19 This translates into massive storage efficiencies on the order of up to 10X.” *See*
20 <https://www.infrascala.com/technologies/>. For similar reasons, Infrascala also
21 induces its customers to use the Accused Instrumentalities to infringe other claims
22 of the '728 Patent. Infrascala specifically intended and was aware that the normal
23 and customary use of the Accused Instrumentalities on compatible systems would
24 infringe the '728 Patent. Infrascala performed the acts that constitute induced
25 infringement, and would induce actual infringement, with the knowledge of the '728
26 Patent and with the knowledge, or willful blindness to the probability, that the
27 induced acts would constitute infringement. On information and belief, Infrascala
28 engaged in such inducement to promote the sales of the Accused Instrumentalities,

1 e.g., through Infracale’s user manuals, product support, marketing materials, and
2 training materials to actively induce the users of the accused products to infringe
3 the ’728 Patent. Accordingly, Infracale has induced and continues to induce end
4 users of the accused products to use the accused products in their ordinary and
5 customary way with compatible systems to make and/or use systems infringing
6 the ’728 Patent, knowing that such use of the Accused Instrumentalities with
7 compatible systems will result in infringement of the ’728 Patent.

8 12. The Accused Instrumentalities analyze, using a processor, data within
9 a data block to identify one or more parameters or attributes of the data within the
10 data block. For example, the Accused Instrumentalities’ include “[F]ile
11 deduplication with up to 10X reduction in backed up data size for highly efficient
12 backups.” See [https://www.infracale.com/wp-content/uploads/pdf/Infracale-](https://www.infracale.com/wp-content/uploads/pdf/Infracale-Data-Protection-Appliances-Data-Sheet.pdf)
13 [Data-Protection-Appliances-Data-Sheet.pdf](https://www.infracale.com/wp-content/uploads/pdf/Infracale-Data-Protection-Appliances-Data-Sheet.pdf). As another example, Infracale’s
14 Cloud Backup requires 1GHz or faster processor. See
15 <https://docs.infracale.com/cb-spec.html#system-requirements>.

16 System requirements

- 17
 - 18 ■ Processor: 1 GHz or faster
 - 19 ■ Disk space: 40 MB (backup client installation package: 14 MB)
 - 20 ■ Microsoft .NET Framework 4.5 or later (automatically downloaded during the backup
21 client installation, if needed)
 - 22 ■ Internet connection (broadband is recommended)

23 As another example, Infracale’s Data Protection Appliances require “2x3 GHz
24 processors (or better).” See [https://www.infracale.com/wp-](https://www.infracale.com/wp-content/uploads/pdf/Infracale-Data-Protection-Appliances-Data-Sheet.pdf)
25 [content/uploads/pdf/Infracale-Data-Protection-Appliances-Data-Sheet.pdf](https://www.infracale.com/wp-content/uploads/pdf/Infracale-Data-Protection-Appliances-Data-Sheet.pdf).

System Requirements			
	Disk 1	Disk 2	Disk 3
Minimum disk space	2 GB – boot volume	180 GB – database volume (should be SSD)	2 TB (or larger) – backup storage volume
Recommended disk space	4 GB – boot volume	360GB – database volume (should be SSD)	2 TB (or larger) – backup storage volume
CPU	2 x 3 GHz processors (or better)		
Minimum RAM memory	16 GB		
Recommended RAM memory	48 GB		
Operating system	Delivered as a VMware virtual machine		

Moreover, Infracore discloses that “[D]ata deduplication identifies duplicate data, removing redundancies and reducing the amount of data transferred and stored.” See <https://www.infracore.com/technologies/>. Furthermore, Infracore leverages “[D]eduplicating File System-Assisted Replication (DDFS-AR) to perform over-the-WAN (block-level) deduplication. DDFS-AR effectively queries your cloud repository before it transmits any data to see if a particular block already exists within the cloud. It only writes to the cloud archive if that block does not yet exist which reduces your network footprint bandwidth costs but dramatically increase the speed of replication.” See <https://www.infracore.com/technologies/>.

13. The Accused Instrumentalities determine, using the processor, whether to output the data block in a received form or in a compressed form. For example, Infracore discloses that “[D]ata deduplication identifies duplicate data, removing redundancies and reducing the amount of data transferred and stored.” See <https://www.infracore.com/technologies/>. Moreover, Infracore leverages “[D]eduplicating File System-Assisted Replication (DDFS-AR) to perform over-the-WAN (block-level) deduplication. DDFS-AR effectively queries your cloud repository before it transmits any data to see if a particular block already exists within the cloud. It only writes to the cloud archive if that block does not yet exist which reduces your network footprint bandwidth costs but dramatically increase the speed of replication.” See <https://www.infracore.com/technologies/>. As another

1 example, Accused Instrumentalities state “[D]eduplication occurs by reading the
2 backup job data and copying unique files to a repository that is also on the RAID,
3 while duplicate files are simply referenced and not copied.” *See*
4 <https://docs.infrascale.com/deduplication-best-practices.html>

5 14. The Accused Instrumentalities perform outputting, using the processor,
6 the data block in the received form or the compressed form based on the
7 determination, wherein the outputting the data block in the compressed form
8 comprises determining whether to compress the data block with content dependent
9 data compression based on the one or more parameters or attributes of the data within
10 the data block or to compress the data block with a single data compression encoder.
11 For example, Infracale discloses that “[D]ata deduplication identifies duplicate
12 data, removing redundancies and reducing the amount of data transferred and
13 stored.” *See* <https://www.infrascale.com/technologies/>. Moreover, Infracale
14 leverages “[D]eduplicating File System-Assisted Replication (DDFS-AR) to
15 perform over-the-WAN (block-level) deduplication. DDFS-AR effectively queries
16 your cloud repository before it transmits any data to see if a particular block already
17 exists within the cloud. It only writes to the cloud archive if that block does not yet
18 exist which reduces your network footprint bandwidth costs but dramatically
19 increase the speed of replication.” *See* <https://www.infrascale.com/technologies/>.
20 As another example, Accused Instrumentalities state “[D]eduplication occurs by
21 reading the backup job data and copying unique files to a repository that is also on
22 the RAID, while duplicate files are simply referenced and not copied.” *See*
23 <https://docs.infrascale.com/deduplication-best-practices.html>. As another example,
24 the Accused Instrumentalities use “data compression to speed up the backup and
25 recovery processes.” *See* [https://docs.infrascale.com/cb-spec.html#data-](https://docs.infrascale.com/cb-spec.html#data-compression)
26 [compression](https://docs.infrascale.com/cb-spec.html#data-compression). As such, Infracale “compresses data using Ionic Zip libraries (lossless
27 compression) *prior* to transfer to the cloud, and decompresses it using Xceed.” *See*
28 <https://docs.infrascale.com/cb-spec.html#data-compression>.

1 15. The Accused Instrumentalities analyze of the data within the data block
2 to identify the one or more parameters or attributes of the data excludes analyzing
3 based only on a descriptor that is indicative of the one or more parameters or
4 attributes of the data within the data block. For example, Infracale discloses that
5 “[D]ata deduplication identifies duplicate data, removing redundancies and reducing
6 the amount of data transferred and stored.” *See*
7 <https://www.infracale.com/technologies/>. Moreover, Infracale leverages
8 “[D]eduplicating File System-Assisted Replication (DDFS-AR) to perform over-
9 the-WAN (block-level) deduplication. DDFS-AR effectively queries your cloud
10 repository before it transmits any data to see if a particular block already exists
11 within the cloud. It only writes to the cloud archive if that block does not yet exist
12 which reduces your network footprint bandwidth costs but dramatically increase the
13 speed of replication.” *See* <https://www.infracale.com/technologies/>. As another
14 example, Accused Instrumentalities state “[D]eduplication occurs by reading the
15 backup job data and copying unique files to a repository that is also on the RAID,
16 while duplicate files are simply referenced and not copied.” *See*
17 <https://docs.infracale.com/deduplication-best-practices.html>.

18 16. Infracale also infringes other claims of the ’728 Patent, directly and
19 through inducing infringement and contributory infringement.

20 17. On information and belief, use of the Accused Instrumentalities in their
21 ordinary and customary fashion results in infringement of the methods claimed by
22 the ’728 Patent.

23 18. By making, using, offering for sale, selling and/or importing into the
24 United States the Accused Instrumentalities, and touting the benefits of using the
25 Accused Instrumentalities’ compression features, Infracale has injured Realtime
26 and is liable to Realtime for infringement of the ’728 Patent pursuant to 35 U.S.C. §
27 271.
28

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1 19. As a result of Infracale’s infringement of the ’728 Patent, Plaintiff
2 Realtime is entitled to monetary damages in an amount adequate to compensate for
3 Infracale’s infringement, but in no event less than a reasonable royalty for the use
4 made of the invention by Infracale, together with interest and costs as fixed by the
5 Court.

6 **COUNT II**

7 **INFRINGEMENT OF U.S. PATENT NO. 9,667,751**

8 20. Plaintiff realleges and incorporates by reference the foregoing
9 paragraphs, as if fully set forth herein.

10 21. Plaintiff Realtime is the owner by assignment of United States Patent
11 No. 9,667,751 (“the ’751 Patent”) entitled “Data feed acceleration.” The ’751 Patent
12 was duly and legally issued by the United States Patent and Trademark Office on
13 May 30, 2017. A true and correct copy of the ’751 Patent is included as Exhibit B.

14 22. On information and belief, Infracale has offered for sale, sold and/or
15 imported into the United States Infracale products and services that infringe
16 the ’751 patent, and continues to do so. By way of illustrative example, these
17 infringing products and services include, without limitation, Infracale’s products
18 and services, *e.g.*, Cloud Backup, Cloud Application Backup, Disaster Recovery,
19 Data Protection Appliances, Cloud Failover Appliance, EndGuard, and the system
20 hardware on which they operate, and all versions and variations thereof since the
21 issuance of the ’751 Patent (“Accused Instrumentalities”).

22 23. On information and belief, Infracale has directly infringed and
23 continues to infringe the ’751 Patent, for example, through its own use and testing
24 of the Accused Instrumentalities, which in the ordinary course of their operation
25 form a system for compressing data claimed by Claim 25 of the ’751 Patent,
26 including: a data server implemented on one or more processors and one or more
27 memory systems; the data server configured to analyze content of a data block to
28 identify a parameter, attribute, or value of the data block that excludes analysis based

1 solely on reading a descriptor; the data server configured to select an encoder
2 associated with the identified parameter, attribute, or value; the data server
3 configured to compress data in the data block with the selected encoder to produce
4 a compressed data block, wherein the compression utilizes a state machine; and the
5 data server configured to store the compressed data block; wherein the time of the
6 compressing the data block and the storing the compressed data block is less than
7 the time of storing the data block in uncompressed form. Upon information and
8 belief, Infrascade uses the Accused Instrumentalities, which are infringing systems,
9 for its own internal non-testing business purposes, while testing the Accused
10 Instrumentalities, and while providing technical support and repair services for the
11 Accused Instrumentalities to Infrascade's customers.

12 24. On information and belief, Infrascade has had knowledge of the '751
13 Patent since at least the filing of the original Complaint in this action, or shortly
14 thereafter, and on information and belief, Infrascade knew of the '751 Patent and
15 knew of its infringement, including by way of this lawsuit.

16 25. Upon information and belief, Infrascade's affirmative acts of making,
17 using, and selling the Accused Instrumentalities, and providing implementation
18 services and technical support to users of the Accused Instrumentalities, have
19 induced and continue to induce users of the Accused Instrumentalities to use them
20 in their normal and customary way to infringe Claim 25 of the '751 Patent by making
21 or using a data server implemented on one or more processors and one or more
22 memory systems; the data server configured to analyze content of a data block to
23 identify a parameter, attribute, or value of the data block that excludes analysis based
24 solely on reading a descriptor; the data server configured to select an encoder
25 associated with the identified parameter, attribute, or value; the data server
26 configured to compress data in the data block with the selected encoder to produce
27 a compressed data block, wherein the compression utilizes a state machine; and the
28 data server configured to store the compressed data block; wherein the time of the

1 compressing the data block and the storing the compressed data block is less than
2 the time of storing the data block in uncompressed form. For example, Infracale
3 explains to customers the benefits of using the Accused Instrumentalities, such as by
4 touting their efficiency: “[D]ata deduplication identifies duplicate data, removing
5 redundancies and reducing the amount of data transferred and stored. ... This
6 translates into massive storage efficiencies on the order of up to 10X.” *See*
7 <https://www.infracale.com/technologies/>. For similar reasons, Infracale also
8 induces its customers to use the Accused Instrumentalities to infringe other claims
9 of the ’751 Patent. Infracale specifically intended and was aware that these normal
10 and customary activities would infringe the ’751 Patent. Infracale performed the
11 acts that constitute induced infringement, and would induce actual infringement,
12 with the knowledge of the ’751 Patent and with the knowledge, or willful blindness
13 to the probability, that the induced acts would constitute infringement. On
14 information and belief, Infracale engaged in such inducement to promote the sales
15 of the Accused Instrumentalities. Accordingly, Infracale has induced and continues
16 to induce users of the accused products to use the accused products in their ordinary
17 and customary way to infringe the ’751 Patent, knowing that such use constitutes
18 infringement of the ’751 Patent.

19 26. The Accused Instrumentalities include a system for compressing data.
20 For example, Infracale discloses that “[D]ata deduplication identifies duplicate
21 data, removing redundancies and reducing the amount of data transferred and
22 stored.” *See* <https://www.infracale.com/technologies/>. Moreover, Infracale
23 leverages “[D]eduplicating File System-Assisted Replication (DDFS-AR) to
24 perform over-the-WAN (block-level) deduplication. DDFS-AR effectively queries
25 your cloud repository before it transmits any data to see if a particular block already
26 exists within the cloud. It only writes to the cloud archive if that block does not yet
27 exist which reduces your network footprint bandwidth costs but dramatically
28 increase the speed of replication.” *See* <https://www.infracale.com/technologies/>.

1 As another example, Accused Instrumentalities state “[D]eduplication occurs by
2 reading the backup job data and copying unique files to a repository that is also on
3 the RAID, while duplicate files are simply referenced and not copied.” *See*
4 <https://docs.infrascale.com/deduplication-best-practices.html>. As another example,
5 the Accused Instrumentalities use “data compression to speed up the backup and
6 recovery processes.” *See* [https://docs.infrascale.com/cb-spec.html#data-](https://docs.infrascale.com/cb-spec.html#data-compression)
7 [compression](https://docs.infrascale.com/cb-spec.html#data-compression). As such, Infracale “compresses data using Ionic Zip libraries (lossless
8 compression) *prior* to transfer to the cloud, and decompresses it using Xceed.” *See*
9 <https://docs.infrascale.com/cb-spec.html#data-compression>.

10 27. The Accused Instrumentalities include a data server implemented on
11 one or more processors and one or more memory systems. For example, Infracale’s
12 Cloud Backup requires 1GHz or faster processor and a disk space of 40 MB. *See*
13 <https://docs.infrascale.com/cb-spec.html#system-requirements>.

14 System requirements

- 15
 - 16 ■ Processor: 1 GHz or faster
 - 17 ■ Disk space: 40 MB (backup client installation package: 14 MB)
 - 18 ■ Microsoft .NET Framework 4.5 or later (automatically downloaded during the backup
19 client installation, if needed)
 - 20 ■ Internet connection (broadband is recommended)

21 As another example, Infracale’s Data Protection Appliances require “2x3 GHz
22 processors (or better)” and a minimum disk space of 2 GB with minimum a RAM
23 memory of 16 GB. *See* [https://www.infrascale.com/wp-](https://www.infrascale.com/wp-content/uploads/pdf/Infracale-Data-Protection-Appliances-Data-Sheet.pdf)
24 [content/uploads/pdf/Infracale-Data-Protection-Appliances-Data-Sheet.pdf](https://www.infrascale.com/wp-content/uploads/pdf/Infracale-Data-Protection-Appliances-Data-Sheet.pdf).

System Requirements			
	Disk 1	Disk 2	Disk 3
Minimum disk space	2 GB – boot volume	180 GB – database volume (should be SSD)	2 TB (or larger) – backup storage volume
Recommended disk space	4 GB – boot volume	360GB – database volume (should be SSD)	2 TB (or larger) – backup storage volume
CPU	2 x 3 GHz processors (or better)		
Minimum RAM memory	16 GB		
Recommended RAM memory	48 GB		
Operating system	Delivered as a VMware virtual machine		

On information and belief, all of the Accused Instrumentalities use one or more memory systems in substantially the same way.

28. The Accused Instrumentalities include a data server configured to analyze content of a data block to identify a parameter, attribute, or value of the data block that excludes analysis based solely on reading a descriptor. For example, Infracore discloses that “[D]ata deduplication identifies duplicate data, removing redundancies and reducing the amount of data transferred and stored.” See <https://www.infracore.com/technologies/>. Moreover, Infracore leverages “[D]eduplicating File System-Assisted Replication (DDFS-AR) to perform over-the-WAN (block-level) deduplication. DDFS-AR effectively queries your cloud repository before it transmits any data to see if a particular block already exists within the cloud. It only writes to the cloud archive if that block does not yet exist which reduces your network footprint bandwidth costs but dramatically increase the speed of replication.” See <https://www.infracore.com/technologies/>. As another example, Accused Instrumentalities state “[D]eduplication occurs by reading the backup job data and copying unique files to a repository that is also on the RAID, while duplicate files are simply referenced and not copied.” See <https://docs.infracore.com/deduplication-best-practices.html>.

29. The Accused Instrumentalities include a data server configured to select an encoder associated with the identified parameter, attribute, or value. For

1 example, the Accused Instrumentalities select between deduplication or other
2 compression. For example, Infracale discloses that “[D]ata deduplication identifies
3 duplicate data, removing redundancies and reducing the amount of data transferred
4 and stored.” See <https://www.infracale.com/technologies/>. Moreover, Infracale
5 leverages “[D]eduplicating File System-Assisted Replication (DDFS-AR) to
6 perform over-the-WAN (block-level) deduplication. DDFS-AR effectively queries
7 your cloud repository before it transmits any data to see if a particular block already
8 exists within the cloud. It only writes to the cloud archive if that block does not yet
9 exist which reduces your network footprint bandwidth costs but dramatically
10 increase the speed of replication.” See <https://www.infracale.com/technologies/>.
11 As another example, Accused Instrumentalities state “[D]eduplication occurs by
12 reading the backup job data and copying unique files to a repository that is also on
13 the RAID, while duplicate files are simply referenced and not copied.” See
14 <https://docs.infracale.com/deduplication-best-practices.html>. As another example,
15 the Accused Instrumentalities use “data compression to speed up the backup and
16 recovery processes.” See [https://docs.infracale.com/cb-spec.html#data-](https://docs.infracale.com/cb-spec.html#data-compression)
17 [compression](https://docs.infracale.com/cb-spec.html#data-compression). As such, Infracale “compresses data using Ionic Zip libraries (lossless
18 compression) *prior* to transfer to the cloud, and decompresses it using Xceed.” See
19 <https://docs.infracale.com/cb-spec.html#data-compression>.

20 30. The Accused Instrumentalities include a data server configured to
21 compress data in the data block with the selected encoder to produce a compressed
22 data block, wherein the compression utilizes a state machine. For example,
23 Infracale discloses that “[D]ata deduplication identifies duplicate data, removing
24 redundancies and reducing the amount of data transferred and stored.” See
25 <https://www.infracale.com/technologies/>. Moreover, Infracale leverages
26 “[D]eduplicating File System-Assisted Replication (DDFS-AR) to perform over-
27 the-WAN (block-level) deduplication. DDFS-AR effectively queries your cloud
28 repository before it transmits any data to see if a particular block already exists


1 within the cloud. It only writes to the cloud archive if that block does not yet exist
 2 which reduces your network footprint bandwidth costs but dramatically increase the
 3 speed of replication.” See <https://www.infrascale.com/technologies/>. As another
 4 example, Accused Instrumentalities state “[D]eduplication occurs by reading the
 5 backup job data and copying unique files to a repository that is also on the RAID,
 6 while duplicate files are simply referenced and not copied.” See
 7 <https://docs.infrascale.com/deduplication-best-practices.html>

8 31. The Accused Instrumentalities include a data server configured to store
 9 the compressed data block. For example, the Accused Instrumentalities have storage
 10 devices. See <https://docs.infrascale.com/cb-spec.html#system-requirements>.

11 System requirements

- 12 ■ Processor: 1 GHz or faster
- 13 ■ Disk space: 40 MB (backup client installation package: 14 MB)
- 14 ■ Microsoft .NET Framework 4.5 or later (automatically downloaded during the backup
 15 client installation, if needed)
- 16 ■ Internet connection (broadband is recommended)

17
 18 See [https://www.infrascale.com/wp-content/uploads/pdf/Infrascale-Data-
 19 Protection-Appliances-Data-Sheet.pdf](https://www.infrascale.com/wp-content/uploads/pdf/Infrascale-Data-Protection-Appliances-Data-Sheet.pdf).

20  System Requirements			
	Disk 1	Disk 2	Disk 3
21 Minimum disk space	2 GB – boot volume	180 GB – database volume <i>(should be SSD)</i>	2 TB (or larger) – backup storage volume
22 Recommended disk space	4 GB – boot volume	360GB – database volume <i>(should be SSD)</i>	2 TB (or larger) – backup storage volume
23 CPU	2 x 3 GHz processors (or better)		
24 Minimum RAM memory	16 GB		
25 Recommended RAM memory	48 GB		
26 Operating system	Delivered as a VMware virtual machine		

1 As another example, Infracore discloses that “[D]ata deduplication identifies
2 duplicate data, removing redundancies and reducing the amount of data transferred
3 and stored.” See <https://www.infracore.com/technologies/>. Moreover, Infracore
4 leverages “[D]eduplicating File System-Assisted Replication (DDFS-AR) to
5 perform over-the-WAN (block-level) deduplication. DDFS-AR effectively queries
6 your cloud repository before it transmits any data to see if a particular block already
7 exists within the cloud. It only writes to the cloud archive if that block does not yet
8 exist which reduces your network footprint bandwidth costs but dramatically
9 increase the speed of replication.” See <https://www.infracore.com/technologies/>.
10 As another example, Accused Instrumentalities state “[D]eduplication occurs by
11 reading the backup job data and copying unique files to a repository that is also on
12 the RAID, while duplicate files are simply referenced and not copied.” See
13 <https://docs.infracore.com/deduplication-best-practices.html>

14 32. The time of the compressing the data block and the storing the
15 compressed data block in the Accused Instrumentalities is less than the time of
16 storing the data block in uncompressed form. Due to the data reduction and
17 acceleration features of the specific compression algorithms used, the time of the
18 compressing the data block and the storing the compressed data block is less than
19 the time of storing the data block in uncompressed form. For example, Infracore
20 discloses that “[D]ata deduplication identifies duplicate data, removing
21 redundancies and reducing the amount of data transferred and stored.” See
22 <https://www.infracore.com/technologies/>. Moreover, Infracore leverages
23 “[D]eduplicating File System-Assisted Replication (DDFS-AR) to perform over-
24 the-WAN (block-level) deduplication. DDFS-AR effectively queries your cloud
25 repository before it transmits any data to see if a particular block already exists
26 within the cloud. It only writes to the cloud archive if that block does not yet exist
27 which reduces your network footprint bandwidth costs but dramatically increase the
28 speed of replication.” See <https://www.infracore.com/technologies/>.

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1 33. On information and belief, Infrascala also infringes, directly and
2 through induced infringement, and continues to infringe other claims of the '751
3 Patent.

4 34. On information and belief, use of the Accused Instrumentalities in their
5 ordinary and customary fashion results in infringement of the methods claimed by
6 the '751 Patent.

7 35. By making, using, offering for sale, selling and/or importing into the
8 United States the Accused Instrumentalities, and touting the benefits of using the
9 Accused Instrumentalities' compression features, Infrascala has injured Realtime
10 and is liable to Realtime for infringement of the '751 Patent pursuant to 35 U.S.C. §
11 271.

12 36. As a result of Infrascala's infringement of the '751 Patent, Plaintiff
13 Realtime is entitled to monetary damages in an amount adequate to compensate for
14 Infrascala' infringement, but in no event less than a reasonable royalty for the use
15 made of the invention by Infrascala, together with interest and costs as fixed by the
16 Court.

17 **COUNT III**

18 **INFRINGEMENT OF U.S. PATENT NO. 8,933,825**

19 37. Plaintiff realleges and incorporates by reference the foregoing
20 paragraphs, as if fully set forth herein. Plaintiff Realtime is the owner by assignment
21 of United States Patent No. 8,933,825 ("the '825 Patent") entitled "Data
22 compression systems and methods." The '825 Patent was duly and legally issued
23 by the United States Patent and Trademark Office on January 13, 2015. A true and
24 correct copy of the '825 Patent is included as Exhibit C.

25 38. On information and belief, Infrascala has offered for sale, sold and/or
26 imported into the United States Infrascala products and services that infringe
27 the '825 patent, and continues to do so. By way of illustrative example, these
28 infringing products and services include, without limitation, Infrascala products and

1 services, *e.g.*, Cloud Backup, Cloud Application Backup, Disaster Recovery, Data
2 Protection Appliances, Cloud Failover Appliance, EndGuard, and the system
3 hardware on which they operate, and all versions and variations thereof since the
4 issuance of the '825 Patent (“Accused Instrumentalities”).

5 39. On information and belief, Infrascala has directly infringed and
6 continues to infringe the '825 Patent, for example, by making, selling, offering for
7 sale, and/or importing the Accused Instrumentalities, and through its own use and
8 testing of the Accused Instrumentalities, which constitute performing a method
9 claimed by Claim 18 of the '825 Patent, comprising: associating at least one encoder
10 to each one of a plurality of parameters or attributes of data; analyzing data within a
11 data block to determine whether a parameter or attribute of the data within the data
12 block is identified for the data block; wherein the analyzing of the data within the
13 data block to identify a parameter or attribute of the data excludes analyzing based
14 only on a descriptor that is indicative of the parameter or attribute of the data within
15 the data block; identifying a first parameter or attribute of the data of the data block;
16 compressing, if the first parameter or attribute of the data is the same as one of the
17 plurality of parameter or attributes of the data, the data block with the at least one
18 encoder associated with the one of the plurality of parameters or attributes of the
19 data that is the same as the first parameter or attribute of the data to provide a
20 compressed data block; and compressing, if the first parameter or attribute of the
21 data is not the same as one of the plurality of parameters or attributes of the data, the
22 data block with a default encoder to provide the compressed data block. Upon
23 information and belief, Infrascala uses the Accused Instrumentalities, which perform
24 the infringing method, for its own internal non-testing business purposes, while
25 testing the Accused Instrumentalities, and while providing technical support and
26 repair services for the Accused Instrumentalities to its customers.

27 40. Infrascala also indirectly infringes the '825 Patent by manufacturing,
28 using, selling, offering for sale, and/or importing the accused products, with

1 knowledge that the accused products were and are especially manufactured and/or
2 especially adapted for use in infringing the '825 Patent and are not a staple article or
3 commodity of commerce suitable for substantial non-infringing use. On information
4 and belief, the Accused Instrumentality is designed to function with compatible
5 hardware to perform a method comprising: associating at least one encoder to each
6 one of a plurality of parameters or attributes of data; analyzing data within a data
7 block to determine whether a parameter or attribute of the data within the data block
8 is identified for the data block; wherein the analyzing of the data within the data
9 block to identify a parameter or attribute of the data excludes analyzing based only
10 on a descriptor that is indicative of the parameter or attribute of the data within the
11 data block; identifying a first parameter or attribute of the data of the data block;
12 compressing, if the first parameter or attribute of the data is the same as one of the
13 plurality of parameter or attributes of the data, the data block with the at least one
14 encoder associated with the one of the plurality of parameters or attributes of the
15 data that is the same as the first parameter or attribute of the data to provide a
16 compressed data block; and compressing, if the first parameter or attribute of the
17 data is not the same as one of the plurality of parameters or attributes of the data, the
18 data block with a default encoder to provide the compressed data block. Because
19 the Accused Instrumentality is designed to operate as the claimed method, the
20 Accused Instrumentality has no substantial non-infringing uses, and any other uses
21 would be unusual, far-fetched, illusory, impractical, occasional, aberrant, or
22 experimental. Infrascala's manufacture, use, sale, offering for sale, and/or
23 importation of the Accused Instrumentality constitutes contributory infringement of
24 the '825 Patent.

25 41. On information and belief, Infrascala has had knowledge of the '825
26 Patent since at least the filing of the original Complaint in this action, or shortly
27 thereafter, and on information and belief, Infrascala knew of the '825 Patent and
28 knew of its infringement, including by way of this lawsuit.

1 42. Infrascale’s affirmative acts of making, using, selling, offering for sale,
2 and/or importing the Accused Instrumentalities have induced and continue to induce
3 users of the Accused Instrumentalities to use the Accused Instrumentalities in their
4 normal and customary way to infringe claims of the ’825 Patent. Use of the Accused
5 Instrumentalities in their ordinary and customary manner results in infringement of
6 claims of the ’825 Patent.

7 43. For example, Infrascale explains to customers the benefits of using the
8 Accused Instrumentalities, such as by touting their performance advantages: “[D]ata
9 deduplication identifies duplicate data, removing redundancies and reducing the
10 amount of data transferred and stored. ... This translates into massive storage
11 efficiencies on the order of up to 10X.” *See*
12 <https://www.infrascale.com/technologies/>. For similar reasons, Infrascale also
13 induces its customers to use the Accused Instrumentalities to infringe other claims
14 of the ’825 Patent. Infrascale specifically intended and was aware that the normal
15 and customary use of the Accused Instrumentalities on compatible systems would
16 infringe the ’825 Patent. Infrascale performed the acts that constitute induced
17 infringement, and would induce actual infringement, with the knowledge of the ’825
18 Patent and with the knowledge, or willful blindness to the probability, that the
19 induced acts would constitute infringement. On information and belief, Infrascale
20 engaged in such inducement to promote the sales of the Accused Instrumentalities,
21 *e.g.*, through Infrascale’s user manuals, product support, marketing materials, and
22 training materials to actively induce the users of the accused products to infringe
23 the ’825 Patent. Accordingly, Infrascale has induced and continues to induce end
24 users of the accused products to use the accused products in their ordinary and
25 customary way with compatible systems to make and/or use systems infringing
26 the ’825 Patent, knowing that such use of the Accused Instrumentalities with
27 compatible systems will result in infringement of the ’825 Patent.
28

1 44. The Accused Instrumentalities associate at least one encoder to each
2 one of a plurality of parameters or attributes of data. For example, the Accused
3 Instrumentalities support lossless Ionic Zip compression and deduplication
4 techniques. (e.g., “compresses data using Ionic Zip libraries (lossless
5 compression) *prior* to transfer to the cloud, and decompresses it using Xceed.” *See*
6 <https://docs.infrascale.com/cb-spec.html#data-compression>). As such, the Accused
7 Instrumentalities analyze data blocks to detect duplicate data blocks (e.g., “[D]ata
8 deduplication identifies duplicate data, removing redundancies and reducing the
9 amount of data transferred and stored.” *See*
10 <https://www.infrascale.com/technologies/>. “[D]eduplicating File System-Assisted
11 Replication (DDFS-AR) to perform over-the-WAN (block-level)
12 deduplication. DDFS-AR effectively queries your cloud repository before it
13 transmits any data to see if a particular block already exists within the cloud. It only
14 writes to the cloud archive if that block does not yet exist which reduces your
15 network footprint bandwidth costs but dramatically increase the speed of
16 replication.” *See* <https://www.infrascale.com/technologies/>. “[D]eduplication
17 occurs by reading the backup job data and copying unique files to a repository that
18 is also on the RAID, while duplicate files are simply referenced and not copied.”
19 *See* <https://docs.infrascale.com/deduplication-best-practices.html>). The Accused
20 Instrumentalities associate deduplication encoder with the duplicate data block and
21 Ionic Zip compression encoder with a unique data block.

22 45. The Accused Instrumentalities analyze data within a data block to
23 determine whether a parameter or attribute of the data within the data block is
24 identified for the data block. For example, the Accused Instrumentalities state that
25 “[D]ata deduplication identifies duplicate data, removing redundancies and reducing
26 the amount of data transferred and stored.” *See*
27 <https://www.infrascale.com/technologies/>. Moreover, Infrascale discloses
28 “[D]eduplicating File System-Assisted Replication (DDFS-AR) to perform over-

1 the-WAN (block-level) deduplication. DDFS-AR effectively queries your cloud
2 repository before it transmits any data to see if a particular block already exists
3 within the cloud. It only writes to the cloud archive if that block does not yet exist
4 which reduces your network footprint bandwidth costs but dramatically increase the
5 speed of replication.” See <https://www.infrascale.com/technologies/>. As another
6 example, Accused Instrumentalities state “[D]eduplication occurs by reading the
7 backup job data and copying unique files to a repository that is also on the RAID,
8 while duplicate files are simply referenced and not copied.” See
9 <https://docs.infrascale.com/deduplication-best-practices.html>.

10 46. The Accused Instrumentalities analyze data, wherein the analyzing of
11 the data within the data block to identify a parameter or attribute of the data excludes
12 analyzing based only on a descriptor that is indicative of the parameter or attribute
13 of the data within the data block. For example, the Accused Instrumentalities
14 support data deduplication (e.g., “[D]ata deduplication identifies duplicate data,
15 removing redundancies and reducing the amount of data transferred and stored.” See
16 <https://www.infrascale.com/technologies/>. “[D]eduplicating File System-Assisted
17 Replication (DDFS-AR) to perform over-the-WAN (block-level)
18 deduplication. DDFS-AR effectively queries your cloud repository before it
19 transmits any data to see if a particular block already exists within the cloud. It only
20 writes to the cloud archive if that block does not yet exist which reduces your
21 network footprint bandwidth costs but dramatically increase the speed of
22 replication.” See <https://www.infrascale.com/technologies/>. “[D]eduplication
23 occurs by reading the backup job data and copying unique files to a repository that
24 is also on the RAID, while duplicate files are simply referenced and not copied.”
25 See <https://docs.infrascale.com/deduplication-best-practices.html>). As such, the
26 Accused Instrumentalities analyze the data blocks to detect duplicate data blocks.

27 47. The Accused Instrumentalities identify a first parameter or attribute of
28 the data of the data block. For example, the Accused Instrumentalities analyze the

1 data blocks to identify duplicate data blocks. In particular, the Accused
2 Instrumentalities state
3 “[D]ata deduplication identifies duplicate data, removing redundancies and reducing
4 the amount of data transferred and stored.” *See*
5 <https://www.infrascale.com/technologies/>. Moreover, Infracore leverages
6 “[D]eduplicating File System-Assisted Replication (DDFS-AR) to perform over-
7 the-WAN (block-level) deduplication. DDFS-AR effectively queries your cloud
8 repository before it transmits any data to see if a particular block already exists
9 within the cloud. It only writes to the cloud archive if that block does not yet exist
10 which reduces your network footprint bandwidth costs but dramatically increase the
11 speed of replication.” *See* <https://www.infrascale.com/technologies/>. As another
12 example, Accused Instrumentalities state “[D]eduplication occurs by reading the
13 backup job data and copying unique files to a repository that is also on the RAID,
14 while duplicate files are simply referenced and not copied.” *See*
15 <https://docs.infrascale.com/deduplication-best-practices.html>.

16 48. The Accused Instrumentalities compress, if the first parameter or
17 attribute of the data is the same as one of the plurality of parameter or attributes of
18 the data, the data block with the at least one encoder associated with the one of the
19 plurality of parameters or attributes of the data that is the same as the first parameter
20 or attribute of the data to provide a compressed data block. For example, the
21 Accused Instrumentalities support data deduplication (e.g., “[D]ata deduplication
22 identifies duplicate data, removing redundancies and reducing the amount of data
23 transferred and stored.” *See* <https://www.infrascale.com/technologies/>.
24 “[D]eduplicating File System-Assisted Replication (DDFS-AR) to perform over-
25 the-WAN (block-level) deduplication. DDFS-AR effectively queries your cloud
26 repository before it transmits any data to see if a particular block already exists
27 within the cloud. It only writes to the cloud archive if that block does not yet exist
28 which reduces your network footprint bandwidth costs but dramatically increase the

1 speed of replication.” See <https://www.infrascale.com/technologies/>.
2 “[D]eduplication occurs by reading the backup job data and copying unique files to
3 a repository that is also on the RAID, while duplicate files are simply referenced and
4 not copied.” See <https://docs.infrascale.com/deduplication-best-practices.html>.) As
5 such, if a duplicate block is found, the Accused Instrumentalities use deduplication
6 technique to eliminate redundancy across data blocks.

7 49. The Accused Instrumentalities compress, if the first parameter or
8 attribute of the data is not the same as one of the plurality of parameters or attributes
9 of the data, the data block with a default encoder to provide the compressed data
10 block. For example, the Accused Instrumentalities support lossless Ionic Zip
11 compression technique. (e.g., “compresses data using Ionic Zip libraries (lossless
12 compression) *prior* to transfer to the cloud, and decompresses it using Xceed.” See
13 <https://docs.infrascale.com/cb-spec.html#data-compression>.) As such, if the data
14 block is not the duplicate of previously stored data block, the Accused
15 Instrumentalities use lossless Ionic Zip compression technique to address
16 redundancy across said data block.

17 50. Infracscale also infringes other claims of the ’825 Patent, directly and
18 through inducing infringement and contributory infringement.

19 51. On information and belief, use of the Accused Instrumentalities in their
20 ordinary and customary fashion results in infringement of the methods claimed by
21 the ’825 Patent.

22 52. By making, using, offering for sale, selling and/or importing into the
23 United States the Accused Instrumentalities, and touting the benefits of using the
24 Accused Instrumentalities’ data storage accelerating features, Infracscale has injured
25 Realtime and is liable to Realtime for infringement of the ’825 Patent pursuant to 35
26 U.S.C. § 271.

27 53. As a result of Infracscale’s infringement of the ’825 Patent, Plaintiff
28 Realtime is entitled to monetary damages in an amount adequate to compensate for

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1 Infrascale’s infringement, but in no event less than a reasonable royalty for the use
2 made of the invention by Infrascale, together with interest and costs as fixed by the
3 Court.

4 **COUNT IV**

5 **INFRINGEMENT OF U.S. PATENT NO. 9,116,908**

6 54. Plaintiff Realtime realleges and incorporates by reference the foregoing
7 paragraphs, as if fully set forth herein.

8 55. Plaintiff Realtime is the owner by assignment of United States Patent
9 No. 9,116,908 (“the ’908 Patent”) entitled “System and methods for accelerated data
10 storage and retrieval.” The ’908 Patent was duly and legally issued by the United
11 States Patent and Trademark Office on August 25, 2015, and Claims 1, 2, 4-6, 9, 11,
12 21, 22, 24, and 25 of the ’908 Patent confirmed as patentable in a Final Written
13 Decision of the Patent Trial and Appeal Board on October 31, 2017. A true and
14 correct copy of the ’908 Patent is included as Exhibit D.

15 56. On information and belief, Infrascale has offered for sale, sold and/or
16 imported into the United States Infrascale products and services that infringe
17 the ’908 Patent, and continues to do so. By way of illustrative example, these
18 infringing products and services include, without limitation, Infrascale’s products
19 and services, *e.g.*, Cloud Backup, Cloud Application Backup, Disaster Recovery,
20 Data Protection Appliances, Cloud Failover Appliance, EndGuard, and the system
21 hardware on which they operate, and all versions and variations thereof since the
22 issuance of the ’908 Patent (the “Accused Instrumentality”).

23 57. On information and belief, Infrascale has directly infringed and
24 continues to infringe the ’908 Patent, for example, through its own use and testing
25 of the Accused Instrumentality, which constitutes a system comprising: a memory
26 device; and a data accelerator configured to compress: (i) a first data block with a
27 first compression technique to provide a first compressed data block; and (ii) a
28 second data block with a second compression technique, different from the first

1 compression technique, to provide a second compressed data block; wherein the
2 compressed first and second data blocks are stored on the memory device, and the
3 compression and storage occurs faster than the first and second data blocks are able
4 to be stored on the memory device in uncompressed form. Upon information and
5 belief, Infrascade uses the Accused Instrumentality, an infringing system, for its own
6 internal non-testing business purposes, while testing the Accused Instrumentality,
7 and while providing technical support and repair services for the Accused
8 Instrumentality to Infrascade's customers.

9 58. On information and belief, use of the Accused Instrumentality in its
10 ordinary and customary fashion results in infringement of the systems claimed by
11 the '908 Patent.

12 59. On information and belief, Infrascade has had knowledge of the '908
13 Patent since at least the filing of the original Complaint or shortly thereafter, and on
14 information and belief, Infrascade knew of the '908 Patent and knew of its
15 infringement, including by way of this lawsuit.

16 60. Upon information and belief, Infrascade's affirmative acts of making,
17 using, and selling the Accused Instrumentalities, and providing implementation
18 services and technical support to users of the Accused Instrumentalities, have induced
19 and continue to induce users of the Accused Instrumentalities to use them in their
20 normal and customary way to infringe Claim 1 of the '908 Patent by making or using
21 a system comprising: a memory device; and a data accelerator configured to
22 compress: (i) a first data block with a first compression technique to provide a first
23 compressed data block; and (ii) a second data block with a second compression
24 technique, different from the first compression technique, to provide a second
25 compressed data block; wherein the compressed first and second data blocks are
26 stored on the memory device, and the compression and storage occurs faster than the
27 first and second data blocks are able to be stored on the memory device in
28 uncompressed form. For example, Infrascade explains to customers the benefits of

1 using the Accused Instrumentalities, such as by touting their performance
2 advantages: “[D]ata deduplication identifies duplicate data, removing redundancies
3 and reducing the amount of data transferred and stored. . . . This translates into
4 massive storage efficiencies on the order of up to 10X.” *See*
5 <https://www.infrascale.com/technologies/>. For similar reasons, Infracale also
6 induces its customers to use the Accused Instrumentalities to infringe other claims of
7 the ’908 Patent. Infracale specifically intended and was aware that these normal and
8 customary activities would infringe the ’908 Patent. Infracale performed the acts
9 that constitute induced infringement, and would induce actual infringement, with the
10 knowledge of the ’908 Patent and with the knowledge, or willful blindness to the
11 probability, that the induced acts would constitute infringement. On information and
12 belief, Infracale engaged in such inducement to promote the sales of the Accused
13 Instrumentalities. Accordingly, Infracale has induced and continues to induce users
14 of the accused products to use the accused products in their ordinary and customary
15 way to infringe the ’908 Patent, knowing that such use constitutes infringement of
16 the ’908 Patent.

17 61. The Accused Instrumentality includes a memory device and a data
18 accelerator configured to compress: (i) a first data block with a first compression
19 technique (e.g., deduplication) to provide a first compressed data block; and (ii) a
20 second data block with a second compression technique (e.g., another compression),
21 different from the first compression technique, to provide a second compressed data
22 block. For example, the Accused Instrumentalities use one or more memory devices.
23 *See* <https://docs.infrascale.com/cb-spec.html#system-requirements>.

System requirements

- Processor: 1 GHz or faster
- Disk space: 40 MB (backup client installation package: 14 MB)
- Microsoft .NET Framework 4.5 or later (automatically downloaded during the backup client installation, if needed)
- Internet connection (broadband is recommended)

See <https://www.infrascale.com/wp-content/uploads/pdf/Infrascale-Data-Protection-Appliances-Data-Sheet.pdf>.

System Requirements			
	Disk 1	Disk 2	Disk 3
Minimum disk space	2 GB – boot volume	180 GB – database volume <i>(should be SSD)</i>	2 TB (or larger) – backup storage volume
Recommended disk space	4 GB – boot volume	360GB – database volume <i>(should be SSD)</i>	2 TB (or larger) – backup storage volume
CPU	2 x 3 GHz processors (or better)		
Minimum RAM memory	16 GB		
Recommended RAM memory	48 GB		
Operating system	Delivered as a VMware virtual machine		

Moreover, Infrascale discloses that “[D]ata deduplication identifies duplicate data, removing redundancies and reducing the amount of data transferred and stored.” See <https://www.infrascale.com/technologies/>. Furthermore, Infrascale leverages “[D]eduplicating File System-Assisted Replication (DDFS-AR) to perform over-the-WAN (block-level) deduplication. DDFS-AR effectively queries your cloud repository before it transmits any data to see if a particular block already exists within the cloud. It only writes to the cloud archive if that block does not yet exist which reduces your network footprint bandwidth costs but dramatically increase the speed of replication.” See <https://www.infrascale.com/technologies/>. As another example, Accused Instrumentalities state “[D]eduplication occurs by reading the

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1 backup job data and copying unique files to a repository that is also on the RAID,
 2 while duplicate files are simply referenced and not copied.” See
 3 <https://docs.infrascale.com/deduplication-best-practices.html>. As another example,
 4 the Accused Instrumentality uses a different data compression “to speed up the
 5 backup and recovery processes.” See [https://docs.infrascale.com/cb-](https://docs.infrascale.com/cb-spec.html#data-compression)
 6 [spec.html#data-compression](https://docs.infrascale.com/cb-spec.html#data-compression). In particular, Infrascale uses “[I]onic Zip libraries
 7 (lossless compression) prior to transfer to the cloud, and decompresses it using
 8 Xceed.” See <https://docs.infrascale.com/cb-spec.html#data-compression>.

9 62. The Accused Instrumentality stores the compressed first and second
 10 data blocks on a memory device. For example, Infrascale includes a memory device.
 11 See <https://docs.infrascale.com/cb-spec.html#system-requirements>.

System requirements

- Processor: 1 GHz or faster
- Disk space: 40 MB (backup client installation package: 14 MB)
- Microsoft .NET Framework 4.5 or later (automatically downloaded during the backup client installation, if needed)
- Internet connection (broadband is recommended)

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19 See [https://www.infrascale.com/wp-content/uploads/pdf/Infrascale-Data-](https://www.infrascale.com/wp-content/uploads/pdf/Infrascale-Data-Protection-Appliances-Data-Sheet.pdf)
 20 [Protection-Appliances-Data-Sheet.pdf](https://www.infrascale.com/wp-content/uploads/pdf/Infrascale-Data-Protection-Appliances-Data-Sheet.pdf).

System Requirements			
	Disk 1	Disk 2	Disk 3
Minimum disk space	2 GB – boot volume	180 GB – database volume <i>(should be SSD)</i>	2 TB (or larger) – backup storage volume
Recommended disk space	4 GB – boot volume	360GB – database volume <i>(should be SSD)</i>	2 TB (or larger) – backup storage volume
CPU	2 x 3 GHz processors (or better)		
Minimum RAM memory	16 GB		
Recommended RAM memory	48 GB		
Operating system	Delivered as a VMware virtual machine		

1 Moreover, Infracore discloses that “[D]ata deduplication identifies duplicate data,
2 removing redundancies and reducing the amount of data transferred and stored.” *See*
3 <https://www.infracore.com/technologies/>. Furthermore, Infracore leverages
4 “[D]eduplicating File System-Assisted Replication (DDFS-AR) to perform over-
5 the-WAN (block-level) deduplication. DDFS-AR effectively queries your cloud
6 repository before it transmits any data to see if a particular block already exists
7 within the cloud. It only writes to the cloud archive if that block does not yet exist
8 which reduces your network footprint bandwidth costs but dramatically increase the
9 speed of replication.” *See* <https://www.infracore.com/technologies/>. As another
10 example, Accused Instrumentalities state “[D]eduplication occurs by reading the
11 backup job data and copying unique files to a repository that is also on the RAID,
12 while duplicate files are simply referenced and not copied.” *See*
13 <https://docs.infracore.com/deduplication-best-practices.html>. As another example,
14 the Accused Instrumentalities use “data compression to speed up the backup and
15 recovery processes.” *See* [https://docs.infracore.com/cb-spec.html#data-](https://docs.infracore.com/cb-spec.html#data-compression)
16 [compression](https://docs.infracore.com/cb-spec.html#data-compression). As such, Infracore “compresses data using Ionic Zip libraries (lossless
17 compression) *prior* to transfer to the cloud, and decompresses it using Xceed.” *See*
18 <https://docs.infracore.com/cb-spec.html#data-compression>.

19 63. The compression and storage occurs faster than the first and second data
20 blocks are able to be stored on the memory device in uncompressed form. Due to
21 the data reduction and acceleration features of the specific compression algorithms
22 used, the time of the compressing the data block and the storing the compressed data
23 block is less than the time of storing the data block in uncompressed form. For
24 example, Infracore discloses that “[D]ata deduplication identifies duplicate data,
25 removing redundancies and reducing the amount of data transferred and stored.” *See*
26 <https://www.infracore.com/technologies/>. Moreover, Infracore leverages
27 “[D]eduplicating File System-Assisted Replication (DDFS-AR) to perform over-
28 the-WAN (block-level) deduplication. DDFS-AR effectively queries your cloud

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1 repository before it transmits any data to see if a particular block already exists
2 within the cloud. It only writes to the cloud archive if that block does not yet exist
3 which reduces your network footprint bandwidth costs but dramatically increase the
4 speed of replication.” See <https://www.infrascale.com/technologies/>.

5 64. On information and belief, Infracore also infringes, directly and
6 through induced infringement, and continues to infringe other claims of the '908
7 Patent.

8 65. By making, using, offering for sale, selling and/or importing into the
9 United States the Accused Instrumentalities, and touting the benefits of using the
10 Accused Instrumentalities' compression features, Infracore has injured Realtime
11 and is liable to Realtime for infringement of the '908 Patent pursuant to 35 U.S.C. §
12 271.

13 66. As a result of Infracore's infringement of the '908 Patent, Plaintiff
14 Realtime is entitled to monetary damages in an amount adequate to compensate for
15 Infracore' infringement, but in no event less than a reasonable royalty for the use
16 made of the invention by Infracore, together with interest and costs as fixed by the
17 Court.

18 **COUNT V**

19 **INFRINGEMENT OF U.S. PATENT NO. 9,859,919**

20 67. Plaintiff Realtime realleges and incorporates by reference the foregoing
21 paragraphs, as if fully set forth herein.

22 68. Plaintiff Realtime is the owner by assignment of United States Patent
23 No. 9,859,919 (“the '919 Patent”) entitled “System and Method for data
24 compression.” The '919 Patent was duly and legally issued by the United States
25 Patent and Trademark Office on January 2, 2018. A true and correct copy of the '919
26 Patent is included as Exhibit E.

27 69. On information and belief, Infracore has offered for sale, sold and/or
28 imported into the United States Infracore products and services that infringe

1 the '919 Patent, and continues to do so. By way of illustrative example, these
2 infringing products and services include, without limitation, Infracale's products
3 and services, *e.g.*, Cloud Backup, Cloud Application Backup, Disaster Recovery,
4 Data Protection Appliances, Cloud Failover Appliance, EndGuard, and the system
5 hardware on which they operate, and all versions and variations thereof since the
6 issuance of the '919 Patent (the "Accused Instrumentality").

7 70. On information and belief, Infracale has directly infringed and
8 continues to infringe the '919 Patent, for example, through its own use and testing
9 of the Accused Instrumentality, which constitutes a system for compressing data in
10 one or more data blocks, comprising: a data storage server implemented on one or
11 more processors and one or more memory systems and configured to: analyze a data
12 block to determine a parameter, attribute, or value of the data block; wherein the
13 analyzing excludes only reading a descriptor or data token associated with the data
14 block; select at least one lossless encoder associated with the determined parameter,
15 attribute, or value; compress data in the data block with the selected at least one
16 lossless encoder to produce a compressed data block, having a size over 10 times
17 smaller than the data block; and store the compressed data block, wherein the time
18 of the compressing the data block and the storing the compressed data block is less
19 than the time of storing the data block in uncompressed form. Upon information and
20 belief, Infracale uses the Accused Instrumentality, an infringing system, for its own
21 internal non-testing business purposes, while testing the Accused Instrumentality,
22 and while providing technical support and repair services for the Accused
23 Instrumentality to Infracale's customers.

24 71. On information and belief, use of the Accused Instrumentality in its
25 ordinary and customary fashion results in infringement of the systems claimed by
26 the '919 Patent.

27 72. On information and belief, Infracale has had knowledge of the '919
28 Patent since at least the filing of this First Amended Complaint or shortly thereafter,

1 and on information and belief, Infrascale knew of the '919 Patent and knew of its
2 infringement, including by way of this lawsuit.

3 73. Upon information and belief, Infrascale's affirmative acts of making,
4 using, and selling the Accused Instrumentalities, and providing implementation
5 services and technical support to users of the Accused Instrumentalities, have
6 induced and continue to induce users of the Accused Instrumentalities to use them
7 in their normal and customary way to infringe Claim 9 of the '919 Patent by making
8 or using a system for compressing data in one or more data blocks, comprising: a
9 data storage server implemented on one or more processors and one or more memory
10 systems and configured to: analyze a data block to determine a parameter, attribute,
11 or value of the data block; wherein the analyzing excludes only reading a descriptor
12 or data token associated with the data block; select at least one lossless encoder
13 associated with the determined parameter, attribute, or value; compress data in the
14 data block with the selected at least one lossless encoder to produce a compressed
15 data block, having a size over 10 times smaller than the data block; and store the
16 compressed data block, wherein the time of the compressing the data block and the
17 storing the compressed data block is less than the time of storing the data block in
18 uncompressed form. For example, Infrascale explains to customers the benefits of
19 using the Accused Instrumentalities, such as by touting their performance
20 advantages: "[D]ata deduplication identifies duplicate data, removing redundancies
21 and reducing the amount of data transferred and stored. ... This translates into
22 massive storage efficiencies on the order of up to 10X." *See*
23 <https://www.infrascale.com/technologies/>. For similar reasons, Infrascale also
24 induces its customers to use the Accused Instrumentalities to infringe other claims
25 of the '919 Patent. Infrascale specifically intended and was aware that these normal
26 and customary activities would infringe the '919 Patent. Infrascale performed the
27 acts that constitute induced infringement, and would induce actual infringement,
28 with the knowledge of the '919 Patent and with the knowledge, or willful blindness

1 to the probability, that the induced acts would constitute infringement. On
2 information and belief, Infracale engaged in such inducement to promote the sales
3 of the Accused Instrumentalities. Accordingly, Infracale has induced and continues
4 to induce users of the accused products to use the accused products in their ordinary
5 and customary way to infringe the '919 Patent, knowing that such use constitutes
6 infringement of the '919 Patent.

7 74. The Accused Instrumentality includes a data storage server
8 implemented on one or more processors and one or more memory systems. For
9 example, Infracale's Cloud Backup requires 1GHz or faster processor and a disk
10 space of 40 MB. See [https://docs.infracale.com/cb-spec.html#system-](https://docs.infracale.com/cb-spec.html#system-requirements)
11 [requirements](https://docs.infracale.com/cb-spec.html#system-requirements).

12 System requirements

- 13
 - 14 ■ Processor: 1 GHz or faster
 - 15 ■ Disk space: 40 MB (backup client installation package: 14 MB)
 - 16 ■ Microsoft .NET Framework 4.5 or later (automatically downloaded during the backup
17 client installation, if needed)
 - 18 ■ Internet connection (broadband is recommended)

19 As another example, Infracale's Data Protection Appliances require "2x3 GHz
20 processors (or better)" and a minimum disk space of 2 GB with minimum a RAM
21 memory of 16 GB. See [https://www.infracale.com/wp-](https://www.infracale.com/wp-content/uploads/pdf/Infracale-Data-Protection-Appliances-Data-Sheet.pdf)
22 [content/uploads/pdf/Infracale-Data-Protection-Appliances-Data-Sheet.pdf](https://www.infracale.com/wp-content/uploads/pdf/Infracale-Data-Protection-Appliances-Data-Sheet.pdf).

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System Requirements			
	Disk 1	Disk 2	Disk 3
Minimum disk space	2 GB – boot volume	180 GB – database volume (should be SSD)	2 TB (or larger) – backup storage volume
Recommended disk space	4 GB – boot volume	360GB – database volume (should be SSD)	2 TB (or larger) – backup storage volume
CPU	2 x 3 GHz processors (or better)		
Minimum RAM memory	16 GB		
Recommended RAM memory	48 GB		
Operating system	Delivered as a VMware virtual machine		

75. The Accused Instrumentality is configured to analyze a data block to determine a parameter, attribute, or value of the data block, wherein the analyzing excludes only reading a descriptor or data token associated with the data block. For example, Infrascale discloses that “[D]ata deduplication identifies duplicate data, removing redundancies and reducing the amount of data transferred and stored.” See <https://www.infrascale.com/technologies/>. Moreover, Infrascale leverages “[D]eduplicating File System-Assisted Replication (DDFS-AR) to perform over-the-WAN (block-level) deduplication. DDFS-AR effectively queries your cloud repository before it transmits any data to see if a particular block already exists within the cloud. It only writes to the cloud archive if that block does not yet exist which reduces your network footprint bandwidth costs but dramatically increase the speed of replication.” See <https://www.infrascale.com/technologies/>. As another example, Accused Instrumentality states “[D]eduplication occurs by reading the backup job data and copying unique files to a repository that is also on the RAID, while duplicate files are simply referenced and not copied.” See <https://docs.infrascale.com/deduplication-best-practices.html>.

76. The Accused Instrumentality is configured to select at least one lossless encoder associated with the determined parameter, attribute, or value. For example, the Accused Instrumentalities select between deduplication or other compression. For example, Infrascale discloses “[D]ata deduplication identifies duplicate data,

1 removing redundancies and reducing the amount of data transferred and stored.” *See*
2 <https://www.infrascale.com/technologies/>. Moreover, Infracale leverages
3 “[D]eduplicating File System-Assisted Replication (DDFS-AR) to perform over-
4 the-WAN (block-level) deduplication. DDFS-AR effectively queries your cloud
5 repository before it transmits any data to see if a particular block already exists
6 within the cloud. It only writes to the cloud archive if that block does not yet exist
7 which reduces your network footprint bandwidth costs but dramatically increase the
8 speed of replication.” *See* <https://www.infrascale.com/technologies/>. As another
9 example, Accused Instrumentalities state “[D]eduplication occurs by reading the
10 backup job data and copying unique files to a repository that is also on the RAID,
11 while duplicate files are simply referenced and not copied.” *See*
12 <https://docs.infrascale.com/deduplication-best-practices.html>. As another example,
13 the Accused Instrumentalities use “data compression to speed up the backup and
14 recovery processes.” *See* [https://docs.infrascale.com/cb-spec.html#data-](https://docs.infrascale.com/cb-spec.html#data-compression)
15 [compression](https://docs.infrascale.com/cb-spec.html#data-compression). As such, Infracale “compresses data using Ionic Zip libraries
16 (lossless compression) *prior* to transfer to the cloud, and decompresses it using
17 Xceed.” *See* <https://docs.infrascale.com/cb-spec.html#data-compression>.

18 77. The Accused Instrumentality compresses data in the data block with the
19 selected at least one lossless encoder to produce a compressed data block, having a
20 size over 10 times smaller than the data block. For example, the Accused
21 Instrumentalities support data deduplication, which is a lossless encoder (e.g.,
22 “[D]ata deduplication identifies duplicate data, removing redundancies and reducing
23 the amount of data transferred and stored.” *See*
24 <https://www.infrascale.com/technologies/>. “[D]eduplicating File System-Assisted
25 Replication (DDFS-AR) to perform over-the-WAN (block-level)
26 deduplication. DDFS-AR effectively queries your cloud repository before it
27 transmits any data to see if a particular block already exists within the cloud. It only
28 writes to the cloud archive if that block does not yet exist which reduces your

1 network footprint bandwidth costs but dramatically increase the speed of
 2 replication.” See <https://www.infrascale.com/technologies/>. “[D]eduplication
 3 occurs by reading the backup job data and copying unique files to a repository that
 4 is also on the RAID, while duplicate files are simply referenced and not copied.”
 5 See <https://docs.infrascale.com/deduplication-best-practices.html>). As another
 6 example, Tan (2017) discloses “[D]ata deduplication is a lossless compression
 7 technology that has been widely used in storage systems for space optimization.”
 8 See Abstract of Multi-Objective Metrics to Evaluate Deduplication Approaches
 9 available at IEEEAccess in Special Section On Heterogeneous Crowdsourced Data
 10 Analytics included herein as Exhibit G. As another example, Infrascale discloses
 11 “[D]ata deduplication identifies duplicate data, removing redundancies and reducing
 12 the amount of data transferred and stored. ... This translates into massive storage
 13 efficiencies on the order of up to 10X.” See
 14 <https://www.infrascale.com/technologies/>.

15 78. The Accused Instrumentality stores the compressed data block, wherein
 16 the time of the compressing the data block and the storing the compressed data block
 17 is less than the time of storing the data block in uncompressed form. For example,
 18 the Accused Instrumentalities have storage devices configured to store the
 19 compressed data block. See <https://docs.infrascale.com/cb-spec.html#system-requirements>.
 20

21 System requirements

- 22
- 23 ■ Processor: 1 GHz or faster
- 24 ■ Disk space: 40 MB (backup client installation package: 14 MB)
- 25 ■ Microsoft .NET Framework 4.5 or later (automatically downloaded during the backup
 client installation, if needed)
- 26 ■ Internet connection (broadband is recommended)
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1 See <https://www.infrascale.com/wp-content/uploads/pdf/Infrascale-Data->
 2 [Protection-Appliances-Data-Sheet.pdf](https://www.infrascale.com/wp-content/uploads/pdf/Infrascale-Data-Protection-Appliances-Data-Sheet.pdf).

System Requirements			
	Disk 1	Disk 2	Disk 3
Minimum disk space	2 GB – boot volume	180 GB – database volume (should be SSD)	2 TB (or larger) – backup storage volume
Recommended disk space	4 GB – boot volume	360GB – database volume (should be SSD)	2 TB (or larger) – backup storage volume
CPU	2 x 3 GHz processors (or better)		
Minimum RAM memory	16 GB		
Recommended RAM memory	48 GB		
Operating system	Delivered as a VMware virtual machine		

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11 Moreover, due to the data reduction and acceleration features of the specific
 12 compression algorithms used, the time of the compressing the data block and the
 13 storing the compressed data block is less than the time of storing the data block in
 14 uncompressed form. As such, Infrascale discloses that “[D]ata deduplication
 15 identifies duplicate data, removing redundancies and reducing the amount of data
 16 transferred and stored.” See <https://www.infrascale.com/technologies/>. Moreover,
 17 Infrascale leverages “[D]eduplicating File System-Assisted Replication (DDFS-AR)
 18 to perform over-the-WAN (block-level) deduplication. DDFS-AR effectively
 19 queries your cloud repository before it transmits any data to see if a particular block
 20 already exists within the cloud. It only writes to the cloud archive if that block does
 21 not yet exist which reduces your network footprint bandwidth costs but dramatically
 22 increase the speed of replication.” See <https://www.infrascale.com/technologies/>.
 23 As another example, Accused Instrumentalities state “[D]eduplication occurs by
 24 reading the backup job data and copying unique files to a repository that is also on
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1 the RAID, while duplicate files are simply referenced and not copied.” See
2 <https://docs.infrascale.com/deduplication-best-practices.html>.

3
4 79. On information and belief, Infracale also infringes, directly and
5 through induced infringement, and continues to infringe other claims of the ’919
6 Patent.

7 80. By making, using, offering for sale, selling and/or importing into the
8 United States the Accused Instrumentalities, and touting the benefits of using the
9 Accused Instrumentalities’ compression features, Infracale has injured Realtime
10 and is liable to Realtime for infringement of the ’919 Patent pursuant to 35 U.S.C. §
11 271.

12 81. As a result of Infracale’s infringement of the ’919 Patent, Plaintiff
13 Realtime is entitled to monetary damages in an amount adequate to compensate for
14 Infracale’ infringement, but in no event less than a reasonable royalty for the use
15 made of the invention by Infracale, together with interest and costs as fixed by the
16 Court.

17 **COUNT VI**

18 **INFRINGEMENT OF U.S. PATENT NO. 10,284,225**

19 82. Plaintiff Realtime realleges and incorporates by reference the foregoing
20 paragraphs, as if fully set forth herein.

21 83. Plaintiff Realtime is the owner by assignment of United States Patent
22 No. 10,284,225 (“the ’225 Patent”) entitled “System and Method for data
23 compression.” The ’225 Patent was duly and legally issued by the United States
24 Patent and Trademark Office on May 7, 2019. A true and correct copy of the ’225
25 Patent is included as Exhibit F.

26 84. On information and belief, Infracale has offered for sale, sold and/or
27 imported into the United States Infracale products and services that infringe the
28 ’225 Patent, and continues to do so. By way of illustrative example, these infringing

1 products and services include, without limitation, Infracore's products and services,
2 *e.g.*, Cloud Backup, Cloud Application Backup, Disaster Recovery, Data Protection
3 Appliances, Cloud Failover Appliance, EndGuard, and the system hardware on
4 which they operate, and all versions and variations thereof since the issuance of the
5 '225 Patent (the "Accused Instrumentality").

6 85. On information and belief, Infracore has directly infringed and
7 continues to infringe the '225 Patent, for example, through its own use and testing
8 of the Accused Instrumentality, which constitutes a system for compressing data in
9 data blocks, comprising: one or more memory devices; first and second lossless
10 encoders configured to utilize different lossless compression techniques; and one or
11 more processors configured to: analyze a data block to determine a parameter,
12 attribute, or value of the data block without only reading a descriptor or data token
13 associated with the data block, select the first lossless encoder when the first lossless
14 encoder is associated with the determined parameter, attribute, or value, and the
15 second lossless encoder when the first lossless encoder is not associated with the
16 determined first parameter, attribute, or value, wherein the selected first lossless
17 encoder can compress data in the data block to produce a compressed data block or
18 the selected second lossless encoder can compress data in the data block to produce
19 a compressed data block, and initiate transmission of the compressed data block in
20 one or more data packets, the one or more data packets including control information
21 and the compressed data block; and wherein the time taken to compress the data
22 block with the first or second lossless encoder and transmit the compressed data
23 block is less than the time to transmit the data block in uncompressed form. Upon
24 information and belief, Infracore uses the Accused Instrumentality, an infringing
25 system, for its own internal non-testing business purposes, while testing the Accused
26 Instrumentality, and while providing technical support and repair services for the
27 Accused Instrumentality to Infracore's customers.
28

1 86. On information and belief, use of the Accused Instrumentality in its
2 ordinary and customary fashion results in infringement of the systems claimed by
3 the '225 Patent.

4 87. On information and belief, Infrascala has had knowledge of the '225
5 Patent since at least the filing of this First Amended Complaint or shortly thereafter,
6 and on information and belief, Infrascala knew of the '225 Patent and knew of its
7 infringement, including by way of this lawsuit.

8 88. Upon information and belief, Infrascala's affirmative acts of making,
9 using, and selling the Accused Instrumentalities, and providing implementation
10 services and technical support to users of the Accused Instrumentalities, have
11 induced and continue to induce users of the Accused Instrumentalities to use them
12 in their normal and customary way to infringe Claim 1 of the '225 Patent by making
13 or using a system for compressing data in data blocks, comprising: one or more
14 memory devices; first and second lossless encoders configured to utilize different
15 lossless compression techniques; and one or more processors configured to:
16 analyze a data block to determine a parameter, attribute, or value of the data block
17 without only reading a descriptor or data token associated with the data block,
18 select the first lossless encoder when the first lossless encoder is associated with the
19 determined parameter, attribute, or value, and the second lossless encoder when the
20 first lossless encoder is not associated with the determined first parameter, attribute,
21 or value, wherein the selected first lossless encoder can compress data in the data
22 block to produce a compressed data block or the selected second lossless encoder
23 can compress data in the data block to produce a compressed data block, and initiate
24 transmission of the compressed data block in one or more data packets, the one or
25 more data packets including control information and the compressed data block; and
26 wherein the time taken to compress the data block with the first or second lossless
27 encoder and transmit the compressed data block is less than the time to transmit the
28 data block in uncompressed form. For example, Infrascala explains to customers the

1 benefits of using the Accused Instrumentalities, such as by touting their performance
2 advantages: “[D]ata deduplication identifies duplicate data, removing redundancies
3 and reducing the amount of data transferred and stored. ... This translates into
4 massive storage efficiencies on the order of up to 10X.” *See*
5 <https://www.infrascale.com/technologies/>. For similar reasons, Infracore also
6 induces its customers to use the Accused Instrumentalities to infringe other claims
7 of the ’225 Patent. Infracore specifically intended and was aware that these normal
8 and customary activities would infringe the ’225 Patent. Infracore performed the
9 acts that constitute induced infringement, and would induce actual infringement,
10 with the knowledge of the ’225 Patent and with the knowledge, or willful blindness
11 to the probability, that the induced acts would constitute infringement. On
12 information and belief, Infracore engaged in such inducement to promote the sales
13 of the Accused Instrumentalities. Accordingly, Infracore has induced and continues
14 to induce users of the accused products to use the accused products in their ordinary
15 and customary way to infringe the ’225 Patent, knowing that such use constitutes
16 infringement of the ’225 Patent.

17 89. The Accused Instrumentality includes one or more memory devices.
18 For example, Infracore’s Cloud Backup requires a disk space of 40 MB. *See*
19 <https://docs.infrascale.com/cb-spec.html#system-requirements>.

20 System requirements

- 21
- 22 ■ Processor: 1 GHz or faster
- 23 ■ Disk space: 40 MB (backup client installation package: 14 MB)
- 24 ■ Microsoft .NET Framework 4.5 or later (automatically downloaded during the backup
25 client installation, if needed)
- 26 ■ Internet connection (broadband is recommended)
- 27
- 28

1 As another example, Infracore's Data Protection Appliances require a minimum
 2 disk space of 2 GB with minimum a RAM memory of 16 GB. See
 3 [https://www.infracore.com/wp-content/uploads/pdf/Infracore-Data-Protection-](https://www.infracore.com/wp-content/uploads/pdf/Infracore-Data-Protection-Appliances-Data-Sheet.pdf)
 4 [Appliances-Data-Sheet.pdf](https://www.infracore.com/wp-content/uploads/pdf/Infracore-Data-Protection-Appliances-Data-Sheet.pdf).

System Requirements			
	Disk 1	Disk 2	Disk 3
Minimum disk space	2 GB – boot volume	180 GB – database volume (should be SSD)	2 TB (or larger) – backup storage volume
Recommended disk space	4 GB – boot volume	360GB – database volume (should be SSD)	2 TB (or larger) – backup storage volume
CPU	2 x 3 GHz processors (or better)		
Minimum RAM memory	16 GB		
Recommended RAM memory	48 GB		
Operating system	Delivered as a VMware virtual machine		

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13 90. The Accused Instrumentality includes first and second lossless
 14 encoders configured to utilize different lossless compression techniques. For
 15 example, Infracore discloses “[D]ata deduplication identifies duplicate data,
 16 removing redundancies and reducing the amount of data transferred and stored.” See
 17 <https://www.infracore.com/technologies/>. Furthermore, Infracore leverages
 18 “[D]eduplicating File System-Assisted Replication (DDFS-AR) to perform over-
 19 the-WAN (block-level) deduplication. DDFS-AR effectively queries your cloud
 20 repository before it transmits any data to see if a particular block already exists
 21 within the cloud. It only writes to the cloud archive if that block does not yet exist
 22 which reduces your network footprint bandwidth costs but dramatically increase the
 23 speed of replication.” See <https://www.infracore.com/technologies/>. As another
 24 example, Accused Instrumentalities state “[D]eduplication occurs by reading the
 25 backup job data and copying unique files to a repository that is also on the RAID,
 26 while duplicate files are simply referenced and not copied.” See
 27 <https://docs.infracore.com/deduplication-best-practices.html>. As another example,
 28 Tan (2017) discloses “[D]ata deduplication is a lossless compression technology that

1 has been widely used in storage systems for space optimization.” See Abstract of
2 Multi-Objective Metrics to Evaluate Deduplication Approaches available at
3 IEEEAccess in Special Section On Heterogeneous Crowdsourced Data Analytics
4 included herein as Exhibit G. As another example, the Accused Instrumentality uses
5 a different data compression “to speed up the backup and recovery processes.” See
6 <https://docs.infrascale.com/cb-spec.html#data-compression>. In particular,
7 Infrascale uses “[I]onic Zip libraries (lossless compression) *prior* to transfer to the
8 cloud, and decompresses it using Xceed.” See [https://docs.infrascale.com/cb-](https://docs.infrascale.com/cb-spec.html#data-compression)
9 [spec.html#data-compression](https://docs.infrascale.com/cb-spec.html#data-compression).

10 91. The Accused Instrumentality includes one or more processors. For
11 example, Infrascale’s Cloud Backup requires 1GHz or faster processor. See
12 <https://docs.infrascale.com/cb-spec.html#system-requirements>.

13 System requirements

- 14
- 15 ■ Processor: 1 GHz or faster
- 16 ■ Disk space: 40 MB (backup client installation package: 14 MB)
- 17 ■ Microsoft .NET Framework 4.5 or later (automatically downloaded during the backup
18 client installation, if needed)
- 19 ■ Internet connection (broadband is recommended)

20 As another example, Infrascale’s Data Protection Appliances require “2x3 GHz
21 processors (or better).” See [https://www.infrascale.com/wp-](https://www.infrascale.com/wp-content/uploads/pdf/Infrascale-Data-Protection-Appliances-Data-Sheet.pdf)
22 [content/uploads/pdf/Infrascale-Data-Protection-Appliances-Data-Sheet.pdf](https://www.infrascale.com/wp-content/uploads/pdf/Infrascale-Data-Protection-Appliances-Data-Sheet.pdf).

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System Requirements			
	Disk 1	Disk 2	Disk 3
Minimum disk space	2 GB – boot volume	180 GB – database volume (should be SSD)	2 TB (or larger) – backup storage volume
Recommended disk space	4 GB – boot volume	360GB – database volume (should be SSD)	2 TB (or larger) – backup storage volume
CPU	2 x 3 GHz processors (or better)		
Minimum RAM memory	16 GB		
Recommended RAM memory	48 GB		
Operating system	Delivered as a VMware virtual machine		

92. The Accused Instrumentality is configured to analyze a data block to determine a parameter, attribute, or value of the data block without only reading a descriptor or data token associated with the data block. For example, Infracore discloses that “[D]ata deduplication identifies duplicate data, removing redundancies and reducing the amount of data transferred and stored.” See <https://www.infracore.com/technologies/>. Moreover, Infracore leverages “[D]eduplicating File System-Assisted Replication (DDFS-AR) to perform over-the-WAN (block-level) deduplication. DDFS-AR effectively queries your cloud repository before it transmits any data to see if a particular block already exists within the cloud. It only writes to the cloud archive if that block does not yet exist which reduces your network footprint bandwidth costs but dramatically increase the speed of replication.” See <https://www.infracore.com/technologies/>. As another example, Accused Instrumentality states “[D]eduplication occurs by reading the backup job data and copying unique files to a repository that is also on the RAID, while duplicate files are simply referenced and not copied.” See <https://docs.infracore.com/deduplication-best-practices.html>.

93. The Accused Instrumentality is configured to selects the first lossless encoder when the first lossless encoder is associated with the determined parameter, attribute, or value, and the second lossless encoder when the first lossless encoder is not associated with the determined first parameter, attribute, or value, wherein the

1 selected first lossless encoder can compress data in the data block to produce a
2 compressed data block or the selected second lossless encoder can compress data in
3 the data block to produce a compressed data block. For example, the Accused
4 Instrumentalities selects data deduplication when a duplicate data block is found
5 (e.g., “[D]ata deduplication identifies duplicate data, removing redundancies and
6 reducing the amount of data transferred and stored.” See
7 <https://www.infrascale.com/technologies/>. “[D]eduplicating File System-Assisted
8 Replication (DDFS-AR) to perform over-the-WAN (block-level)
9 deduplication. DDFS-AR effectively queries your cloud repository before it
10 transmits any data to see if a particular block already exists within the cloud. It only
11 writes to the cloud archive if that block does not yet exist which reduces your
12 network footprint bandwidth costs but dramatically increase the speed of
13 replication.” See <https://www.infrascale.com/technologies/>. “[D]eduplication
14 occurs by reading the backup job data and copying unique files to a repository that
15 is also on the RAID, while duplicate files are simply referenced and not copied.”
16 See <https://docs.infrascale.com/deduplication-best-practices.html>.) As another
17 example, Tan (2017) discloses “[D]ata deduplication is a lossless compression
18 technology that has been widely used in storage systems for space optimization.”
19 See Abstract of Multi-Objective Metrics to Evaluate Deduplication Approaches
20 available at IEEEAccess in Special Section On Heterogeneous Crowdsourced Data
21 Analytics included herein as Exhibit G. For example, the Accused Instrumentalities
22 support lossless Ionic Zip compression technique. (e.g., “compresses data using
23 Ionic Zip libraries (lossless compression) *prior* to transfer to the cloud, and
24 decompresses it using Xceed.” See [https://docs.infrascale.com/cb-spec.html#data-
25 compression](https://docs.infrascale.com/cb-spec.html#data-compression)). As such, if a data block is not the duplicate of previously stored data
26 block, the Accused Instrumentalities select a lossless Ionic Zip compression
27 technique to address redundancies within said data block.
28

1 94. The Accused Instrumentality initiates transmission of the compressed
2 data block in one or more data packets, the one or more data packets including
3 control information and the compressed data block, wherein the time taken to
4 compress the data block with the first or second lossless encoder and transmit the
5 compressed data block is less than the time to transmit the data block in
6 uncompressed form. Due to the data reduction and acceleration features of the
7 specific compression algorithms used, the time of the compressing the data block
8 and the transmitting the compressed data block is less than the time of transmitting
9 the data block in uncompressed form. As such, Infracore discloses that “[D]ata
10 deduplication identifies duplicate data, removing redundancies and reducing the
11 amount of data transferred and stored.” *See*
12 <https://www.infracore.com/technologies/>. Moreover, Infracore leverages
13 “[D]eduplicating File System-Assisted Replication (DDFS-AR) to perform over-
14 the-WAN (block-level) deduplication. DDFS-AR effectively queries your cloud
15 repository before it transmits any data to see if a particular block already exists
16 within the cloud. It only writes to the cloud archive if that block does not yet exist
17 which reduces your network footprint bandwidth costs but dramatically increase the
18 speed of replication.” *See* <https://www.infracore.com/technologies/>.

19 95. On information and belief, Infracore also infringes, directly and
20 through induced infringement, and continues to infringe other claims of the ’225
21 Patent.

22 96. By making, using, offering for sale, selling and/or importing into the
23 United States the Accused Instrumentalities, and touting the benefits of using the
24 Accused Instrumentalities’ compression features, Infracore has injured Realtime
25 and is liable to Realtime for infringement of the ’225 Patent pursuant to 35 U.S.C. §
26 271.

27 97. As a result of Infracore’s infringement of the ’225 Patent, Plaintiff
28 Realtime is entitled to monetary damages in an amount adequate to compensate for

1 Infrascala’ infringement, but in no event less than a reasonable royalty for the use
2 made of the invention by Infrascala, together with interest and costs as fixed by the
3 Court.

4 **PRAYER FOR RELIEF**

5 WHEREFORE, Plaintiff Realtime respectfully requests that this Court enter:

6 a. A judgment in favor of Plaintiff that Infrascala has infringed, either
7 literally and/or under the doctrine of equivalents, the ’728 Patent, the ’751 Patent,
8 the ’825 Patent, the ’908 Patent, the ‘919 Patent, and the ‘225 Patent;

9 b. A permanent injunction prohibiting Infrascala from further acts of
10 infringement of the ’728 Patent, the ’751 Patent, the ’825 Patent, the ’908 Patent, the
11 ‘919 Patent, and the ‘225 Patent;

12 c. A judgment and order requiring Infrascala to pay Plaintiff its damages,
13 costs, expenses, and prejudgment and post-judgment interest for its infringement of
14 the ’728 Patent, the ’751 Patent, the ’825 Patent, the ’908 Patent, the ‘919 Patent,
15 and the ‘225 Patent; and

16 d. A judgment and order requiring Infrascala to provide an accounting and
17 to pay supplemental damages to Realtime, including without limitation, prejudgment
18 and post-judgment interest;

19 e. A judgment and order finding that this is an exceptional case within the
20 meaning of 35 U.S.C. § 285 and awarding to Plaintiff its reasonable attorneys’ fees
21 against Defendants; and

22 f. Any and all other relief as the Court may deem appropriate and just
23 under the circumstances.

24 **DEMAND FOR JURY TRIAL**

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

27
28 Respectfully submitted,

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