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

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| REALTIME DATA LLC d/b/a IXO,<br><br>Plaintiff,<br><br>v.<br><br>QUEST SOFTWARE, INC.,<br><br>Defendant. | C.A. No. 18-1964-CFC<br><br>**JURY TRIAL DEMANDED** |

**FIRST AMENDED COMPLAINT FOR PATENT INFRINGEMENT AGAINST QUEST SOFTWARE, INC.**

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

## PARTIES

1. Realtime is a limited liability company organized under the laws of the State of New York. Realtime has its principal place of business at 66 Palmer Avenue, Suite 27, Bronxville, NY 10708. Since the 1990s, Realtime has researched and developed specific solutions for data compression, including, for example, those that increase the speeds at which data can be stored and accessed. As recognition of its innovations rooted in this technological field, Realtime holds 40 United States patents and has numerous pending patent applications. Realtime has licensed patents in this portfolio to many of the world's leading technology companies. The patents-in-suit relate to Realtime's development of advanced systems and methods for fast and efficient data compression using numerous innovative compression techniques based on, for example, particular attributes of the data.

2. On information and belief, Quest Software is a Delaware corporation with its principal place of business at 4 Polaris Way, Aliso Viejo, California 92656. Quest Software can be served through its registered agent, The Corporation Trust Company, 1209 Orange Street, Wilmington, Delaware 19801.

## JURISDICTION AND VENUE

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

4. This Court has personal jurisdiction over Defendant Quest Software in this action because Quest Software is incorporated in Delaware and has committed acts within the District of Delaware giving rise to this action and has established minimum contacts with this forum such that the exercise of jurisdiction over Quest Software would not offend traditional notions of fair play and substantial justice. Quest Software, directly and through subsidiaries or intermediaries, has committed and continues to commit acts of infringement in this District by, among other things, offering to sell and selling products and/or services that infringe the asserted patents.

5. Venue is proper in this district under 28 U.S.C. § 1400(b). Upon information and belief, Quest Software is incorporated in Delaware, has transacted business in the District of Delaware, and has committed acts of direct and indirect infringement in the District of Delaware.

## COUNT I
## INFRINGEMENT OF U.S. PATENT NO. 9,054,728

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

7. Plaintiff Realtime is the owner by assignment of United States Patent No. 9,054,728 ("the '728 Patent") entitled "Data compression systems and methods." The '728 Patent was duly and legally issued by the United States Patent and Trademark Office on June 9, 2015. A true and correct copy of the '728 Patent is included as Exhibit A.

8. On information and belief, Quest Software has offered for sale, sold and/or imported into the United States Quest Software products and services that infringe the '728 patent, and continues to do so. By way of illustrative example, these infringing products and services include, without limitation, Quest Softwareproducts and services, *e.g.*, NetVault Backup, Rapid Recovery, QoreStor, and the system hardware on which they operate, and all versions and variations thereof since the issuance of the '728 Patent ("Accused Instrumentalities"). Each of the accused functionalities operate in substantially similar manner at least with respect to the deduplication and compression functionalities described herein. *See, e.g.*, https://www.quest.com/products/rapid-recovery/ ("With Rapid Recovery, you get one advanced, admin-friendly solution — with all capabilities included. Plus, significantly reduce storage requirements and associated costs with built-in compression and deduplication;" https://www.quest.com/products/netvault-backup/ (a feature of NetVault Backup is "Data Deduplication and replication"). Further, NetVault Backup utilizes the QoreStor technology described below for at least some its deduplication and compression functionality. https://www.quest.com/products/netvault-backup/ ("NetVault Backup is tightly integrated with Quest QoreStor™, a software-defined secondary storage platform. QoreStor helps accelerate backups, reduce storage requirements and costs, and replicate faster and safer to the cloud for archiving and disaster recovery. . . . Try our QoreStor dedupe calculator to see how much you can save on

storage."; https://www.quest.com/documents/netvault-backup-datasheet-67999.pdf (referring to NetVault's "Quest QoreStorTM integration — Get direct-to-storage backup with this software-defined storage and data deduplication solution with client- side deduplication and compression — delivering significant performance improvements and greater storage efficiency.").

9. On information and belief, Quest Software has directly infringed and continues to infringe the '728 Patent, for example, by making, selling, offering for sale, and/or importing the Accused Instrumentalities, and through its own use and testing of the Accused Instrumentalities, which constitute systems for compressing data claimed by Claim 1 of the '728 Patent, comprising: a processor; one or more content dependent data compression encoders; and a single data compression encoder; wherein the processor is configured: to analyze data within a data block to identify one or more parameters or attributes of the data wherein the analyzing of the data within the data block to identify the one or more parameters or attributes of the data excludes analyzing based solely on a descriptor that is indicative of the one or more parameters or attributes of the data within the data block; to perform content dependent data compression with the one or more content dependent data compression encoders if the one or more parameters or attributes of the data are identified; and to perform data compression with the single data compression encoder, if the one or more parameters or attributes of the data are not identified. Upon information and belief, Quest Software uses the Accused Instrumentalities, which are infringing systems, for its own internal non-testing business purposes, while testing the Accused Instrumentalities, and while providing technical support and repair services for the Accused Instrumentalities to Quest Software's customers.

10. Quest Software also indirectly infringes the ’728 Patent by manufacturing, using, selling, offering for sale, and/or importing the accused products, with knowledge that the accused products were and are especially manufactured and/or especially adapted for use in infringing the ’728 Patent and are not a staple article or commodity of commerce suitable for substantial non-infringing use. On information and belief, the Accused Instrumentality is designed to function with compatible hardware to create a system for compressing data comprising; a processor; one or more content dependent data compression encoders; and a single data compression encoder; wherein the processor is configured: to analyze data within a data block to identify one or more parameters or attributes of the data wherein the analyzing of the data within the data block to identify the one or more parameters or attributes of the data excludes analyzing based solely on a descriptor that is indicative of the one or more parameters or attributes of the data within the data block; to perform content dependent data compression with the one or more content dependent data compression encoders if the one or more parameters or attributes of the data are identified; and to perform data compression with the single data compression encoder, if the one or more parameters or attributes of the data are not identified. Because the Accused Instrumentality is designed to operate as the claimed system for compressing, the Accused Instrumentality has no substantial non-infringing uses, and any other uses would be unusual, far-fetched, illusory, impractical, occasional, aberrant, or experimental. Quest Software’s manufacture, use, sale, offering for sale, and/or importation of the Accused Instrumentality constitutes contributory infringement of the ’728 Patent.

11. On information and belief, Quest Software has had knowledge of the ’728 Patent since at least the filing of the original Complaint in this action, or shortly thereafter,

and on information and belief, Quest Software knew of the ’728 Patent and knew of its infringement, including by way of this lawsuit.

12. Quest Software’s affirmative acts of making, using, selling, offering for sale, and/or importing the Accused Instrumentalities have induced and continue to induce users of the Accused Instrumentalities to use the Accused Instrumentalities in their normal and customary way on compatible systems to infringe Claim 1 of the ’728 Patent, knowing that when the Accused Instrumentalities are used in their ordinary and customary manner with such compatible systems, such systems constitute infringing systems for compressing data comprising; a processor; one or more content dependent data compression encoders; and a single data compression encoder; wherein the processor is configured: to analyze data within a data block to identify one or more parameters or attributes of the data wherein the analyzing of the data within the data block to identify the one or more parameters or attributes of the data excludes analyzing based solely on a descriptor that is indicative of the one or more parameters or attributes of the data within the data block; to perform content dependent data compression with the one or more content dependent data compression encoders if the one or more parameters or attributes of the data are identified; and to perform data compression with the single data compression encoder, if the one or more parameters or attributes of the data are not identified. For example, Quest Software explains to customers the benefits of using the Accused Instrumentalities, such as by touting their performance advantages: “[I]n general, QoreStor offers advanced deduplication and compression capabilities to reduce the time and cost associated with backing up and restoring data. Based on deduplication and compression technology,

QoreStor eliminates the need to maintain multiple copies of the same data. This lets customers keep more data online longer and reduce the need for tape backup dependency." *See* Quest QoreStor 5.0 User Guide. For similar reasons, Quest Software also induces its customers to use the Accused Instrumentalities to infringe other claims of the '728 Patent. Quest Software specifically intended and was aware that the normal and customary use of the Accused Instrumentalities on compatible systems would infringe the '728 Patent. Quest Software performed the acts that constitute induced infringement, and would induce actual infringement, with the knowledge of the '728 Patent and with the knowledge, or willful blindness to the probability, that the induced acts would constitute infringement. On information and belief, Quest Software engaged in such inducement to promote the sales of the Accused Instrumentalities, *e.g.*, through Quest Software's user manuals, product support, marketing materials, and training materials to actively induce the users of the accused products to infringe the '728 Patent. Accordingly, Quest Software has induced and continues to induce end users of the accused products to use the accused products in their ordinary and customary way with compatible systems to make and/or use systems infringing the '728 Patent, knowing that such use of the Accused Instrumentalities with compatible systems will result in infringement of the '728 Patent.

13. The Accused Instrumentalities include a system for compressing data, comprising a processor. For example, the Accused Instrumentalities provide Dashboard page that displays "information about memory and CPU usage." *See* Quest QoreStor 5.0 User Guide. As another example, the Accused Instrumentalities provide a table with minimum RAM and CPU requirements based on multiple factors.

<table>
<tr><th>Number of Clients</th><th>Base NetVault Server</th><th>NetVault Server with RDA enabled plug-in installed</th><th>Catalog Search sizing additional recommended requirements</th></tr>
<tr><td>Up to 50</td><td>Minimum Requirements:<br>RAM - 12GB<br>CPU – 2.5Ghz Dual-socket, 4 Core</td><td rowspan="4">If the VMware or Hyper-V plug-in is installed on the NetVault server then:<ul><li>Add an additional 4GB to 12GB of RAM to the server.</li><li>Use caution when installing the VMware/Hyper-VM plug-in and the Bare Metal Recovery plug-ins on the NetVault server in larger environments.</li><li>In some configurations the backup data will flow via the server that the plug-in is installed on. It is better to use multiple SmartClients/Clients on dedicated servers to distribute the backup load.</li></ul></td><td>RAM – 1GB<br>CPU – 1 core</td></tr>
<tr><td>Up to 200</td><td>Minimum Requirements:<br>RAM – 24GB<br>CPU – 2.5Ghz Dual-socket, 4 Core<br><br>Suggested Requirements:<br>CPU – 3.0Ghz, Dual-socket, 8 Core</td><td rowspan="2">RAM – 1-to-12 GB<br>CPU – 1-2 cores</td></tr>
<tr><td>Up to 400</td><td>Minimum Requirements:<br>RAM - 32GB<br>CPU – 2.5Ghz Dual-socket, 4 Core<br><br>Suggested Requirements:<br>CPU – 3.2Ghz, Dual-socket, 10 Core</td></tr>
<tr><td>Up to 700</td><td>Minimum Requirements:<br>RAM - 48GB<br>CPU – 2.5Ghz Dual-socket, 4 Core</td><td rowspan="2">RAM – 12-to-30GB<br>CPU – 2-4 cores</td></tr>
<tr><td>Up to 1000</td><td>Minimum Requirements:<br>RAM - 64GB<br>CPU – 2.5Ghz Dual-socket, 4 Core<br><br>Suggested Requirements:<br>CPU – fastest available, Dual-socket maximum, disk IOPs is most critical. SSD should be considered.</td></tr>
</table>

*See* NetVault Backup Client and Server Sizing Guide 3.0.

14. The Accused Instrumentalities include a system for compressing data, comprising one or more content dependent data compression encoders. For example, the Accused Instrumentalities perform block-level deduplication, which is a content dependent data compression encoder. As such, the Accused Instrumentalities disclose that the deduplication "technology eliminates redundant copies of data and in the process it decreases disk capacity requirements and reduces the bandwidth needed for data transfer." *See* Quest QoreStor 5.0 User Guide. Thus, performing deduplication results in compression by representing data with fewer bits.

15. The Accused Instrumentalities comprise a single data compression encoder. For example, the Accused Instrumentalities provide "generic and custom compression solutions that prove effective across many differing file types." *See* Quest QoreStor 5.0

User Guide. As another example, the Accused Instrumentalities state that compression "technology reduces the size of data that is stored, protected, and transmitted. Compression helps companies improve their backup and recovery times while helping reduce infrastructure and network resource constraints." *See* Quest QoreStor 5.0 User Guide.

16. The Accused Instrumentalities analyze data within a data block to identify one or more parameters or attributes of the data, for example, whether the data is duplicative of data previously transmitted and/or stored, where the analysis does not rely only on the descriptor. As another example, the Accused Instrumentalities disclose that the deduplication "technology eliminates redundant copies of data and in the process it decreases disk capacity requirements and reduces the bandwidth needed for data transfer." *See* Quest QoreStor 5.0 User Guide. For example, the Accused Instrumentalities disclose that "the chunk is identified, a SHA 1 hash is generated and stored in the dedupe dictionary. Any future occurrences of the data will be found, since the same chunk will be identified. The SHA1 hashes will match, and the data will be deduplicated." *See* Deduplication: The hidden truth and what it may be costing you. For example, in performing this Hash analysis, the Accused Instrumentalities are not relying only on a descriptor.

17. The Accused Instrumentalities perform content dependent data compression with the one or more content dependent data compression encoders if the one or more parameters or attributes of the data are identified. As another example, the Accused Instrumentalities disclose that the deduplication "technology eliminates redundant copies of data and in the process it decreases disk capacity requirements and reduces the bandwidth needed for data transfer." *See* Quest QoreStor 5.0 User Guide. For example, the Accused Instrumentalities disclose that "the chunk is identified, a SHA 1 hash

is generated and stored in the dedupe dictionary. Any future occurrences of the data will be found, since the same chunk will be identified. The SHA1 hashes will match, and the data will be deduplicated." *See* Deduplication: The hidden truth and what it may be costing you.

18. The Accused Instrumentalities perform data compression with the single data compression encoder, if the one or more parameters or attributes of the data are not identified. For example, the Accused Instrumentalities use "various data-reduction technologies, including advanced deduplication algorithms, in addition to the generic and custom compression solutions." *See* Quest QoreStor 5.0 User Guide. As another example, Accused Instrumentalities disclose that compression "reduces the size of data that is stored, protected, and transmitted." *See* Quest QoreStor 5.0 User Guide.

19. Quest Software also infringes other claims of the '728 Patent, directly and through inducing infringement and contributory infringement.

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

21. By making, using, offering for sale, selling and/or importing into the United States the Accused Instrumentalities, and touting the benefits of using the Accused Instrumentalities' compression features, Quest Software has injured Realtime and is liable to Realtime for infringement of the '728 Patent pursuant to 35 U.S.C. § 271.

22. As a result of Quest Software's infringement of the '728 Patent, Plaintiff Realtime is entitled to monetary damages in an amount adequate to compensate for Quest

Software's infringement, but in no event less than a reasonable royalty for the use made of the invention by Quest Software, together with interest and costs as fixed by the Court.

## COUNT II
## INFRINGEMENT OF U.S. PATENT NO. 9,667,751

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

24. Plaintiff Realtime is the owner by assignment of United States Patent No. 9,667,751 ("the '751 Patent") entitled "Data feed acceleration." The '751 Patent was duly and legally issued by the United States Patent and Trademark Office on May 30, 2017. A true and correct copy of the '751 Patent is included as Exhibit B.

25. On information and belief, Quest Software has offered for sale, sold and/or imported into the United States Quest Software products and services that infringe the '751 patent, and continues to do so. By way of illustrative example, these infringing products and services include, without limitation, Quest Software's products and services, *e.g.*, NetVault Backup, Rapid Recovery, QoreStor, and the system hardware on which they operate, and all versions and variations thereof since the issuance of the '751 Patent ("Accused Instrumentalities"). Each of the accused functionalities operate in substantially similar manner at least with respect to the deduplication and compression functionalities described herein. *See, e.g.*, https://www.quest.com/products/rapid-recovery/ ("With Rapid Recovery, you get one advanced, admin-friendly solution — with all capabilities included. Plus, significantly reduce storage requirements and associated costs with built-in compression and deduplication;" https://www.quest.com/products/netvault-backup/ (a feature of NetVault Backup is "Data Deduplication and replication"). Further, NetVault Backup utilizes the QoreStor technology described below for at least some its

deduplication and compression functionality. https://www.quest.com/products/netvault-backup/ ("NetVault Backup is tightly integrated with Quest QoreStor™, a software-defined secondary storage platform. QoreStor helps accelerate backups, reduce storage requirements and costs, and replicate faster and safer to the cloud for archiving and disaster recovery. . . . Try our QoreStor dedupe calculator to see how much you can save on storage."; https://www.quest.com/documents/netvault-backup-datasheet-67999.pdf (referring to NetVault's "Quest QoreStorTM integration — Get direct-to-storage backup with this software-defined storage and data deduplication solution with client- side deduplication and compression — delivering significant performance improvements and greater storage efficiency.").

26. On information and belief, Quest Software has directly infringed and continues to infringe the '751 Patent, for example, through its own use and testing of the Accused Instrumentalities, which in the ordinary course of their operation form a system for compressing data claimed by Claim 25 of the '751 Patent, including: a data server implemented on one or more processors and one or more memory systems; the 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; the data server configured to select an encoder associated with the identified parameter, attribute, or value; the data server configured to compress data in the data block with the selected encoder to produce a compressed data block, wherein the compression utilizes a state machine; and the data server configured to store the compressed data block; wherein the time of the compressing the data block and the storing the compressed data block is less than the time of storing the data block in uncompressed form. Upon information and belief, Quest

Software uses the Accused Instrumentalities, which are infringing systems, for its own internal non-testing business purposes, while testing the Accused Instrumentalities, and while providing technical support and repair services for the Accused Instrumentalities to Quest Software's customers.

27. On information and belief, Quest Software has had knowledge of the '751 Patent since at least the filing of the original Complaint in this action, or shortly thereafter, and on information and belief, Quest Software knew of the '751 Patent and knew of its infringement, including by way of this lawsuit.

28. Upon information and belief, Quest Software's affirmative acts of making, using, and selling the Accused Instrumentalities, and providing implementation services and technical support to users of the Accused Instrumentalities, have induced and continue to induce users of the Accused Instrumentalities to use them in their normal and customary way to infringe Claim 25 of the '751 Patent by making or using a data server implemented on one or more processors and one or more memory systems; the 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; the data server configured to select an encoder associated with the identified parameter, attribute, or value; the data server configured to compress data in the data block with the selected encoder to produce a compressed data block, wherein the compression utilizes a state machine; and the data server configured to store the compressed data block; wherein the time of the compressing the data block and the storing the compressed data block is less than the time of storing the data block in uncompressed form. For example, Quest Software explains to customers the benefits of using the Accused Instrumentalities, such as by touting their efficiency: "[I]n

general, QoreStor offers advanced deduplication and compression capabilities to reduce the time and cost associated with backing up and restoring data. Based on deduplication and compression technology, QoreStor eliminates the need to maintain multiple copies of the same data. This lets customers keep more data online longer and reduce the need for tape backup dependency." *See* Quest QoreStor 5.0 User Guide. For similar reasons, Quest Software also induces its customers to use the Accused Instrumentalities to infringe other claims of the '751 Patent. Quest Software specifically intended and was aware that these normal and customary activities would infringe the '751 Patent. Quest Software performed the acts that constitute induced infringement, and would induce actual infringement, with the knowledge of the '751 Patent and with the knowledge, or willful blindness to the probability, that the induced acts would constitute infringement. On information and belief, Quest Software engaged in such inducement to promote the sales of the Accused Instrumentalities. Accordingly, Quest Software has induced and continues to induce users of the accused products to use the accused products in their ordinary and customary way to infringe the '751 Patent, knowing that such use constitutes infringement of the '751 Patent.

29. Quest Software also indirectly infringes the '751 Patent by manufacturing, using, selling, offering for sale, and/or importing the accused products, with knowledge that the accused products were and are especially manufactured and/or especially adapted for use in infringing the '751 Patent and are not a staple article or commodity of commerce suitable for substantial non-infringing use. On information and belief, the Accused Instrumentality is designed to function as a data server implemented on one or more processors and one or more memory systems; the 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; the data server configured to select an encoder associated with the identified parameter, attribute, or value; the data server configured to compress data in the data block with the selected encoder to produce a compressed data block, wherein the compression utilizes a state machine; and the data server configured to store the compressed data block; wherein the time of the compressing the data block and the storing the compressed data block is less than the time of storing the data block in uncompressed form. Because the Accused Instrumentality is designed to operate as the claimed system for compressing, the Accused Instrumentality has no substantial non-infringing uses, and any other uses would be unusual, far-fetched, illusory, impractical, occasional, aberrant, or experimental. Quest Software's manufacture, use, sale, offering for sale, and/or importation of the Accused Instrumentality constitutes contributory infringement of the '751 Patent.

30. The Accused Instrumentalities include a system for compressing data. For example, the Accused Instrumentalities include a software solution that "can run on virtually any server hardware." https://www.quest.com/products/qorestor/. Moreover, the Accused Instrumentalities state that the software solution "delivers content-aware variable-block deduplication with built-in compression and encryption that delivers unparalleled storage savings." https://www.quest.com/products/qorestor/.

31. The Accused Instrumentalities include a data server implemented on one or more processors and one or more memory systems. For example, the Accused Instrumentalities provide Dashboard page that displays "information about memory and CPU usage." *See* Quest QoreStor 5.0 User Guide. As another example, the Accused

Instrumentalities provide a table with minimum RAM and CPU requirements based on multiple factors.

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<tr><th>Number of Clients</th><th>Base NetVault Server</th><th>NetVault Server with RDA enabled plug-in installed</th><th>Catalog Search sizing additional recommended requirements</th></tr>
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<tr><td>Up to 200</td><td>Minimum Requirements:<br>RAM – 24GB<br>CPU – 2.5Ghz Dual-socket, 4 Core<br><br>Suggested Requirements:<br>CPU – 3.0Ghz, Dual-socket, 8 Core</td><td rowspan="2">RAM – 1-to-12 GB<br>CPU – 1-2 cores</td></tr>
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<tr><td>Up to 700</td><td>Minimum Requirements:<br>RAM - 48GB<br>CPU – 2.5Ghz Dual-socket, 4 Core</td><td rowspan="2">RAM – 12-to-30GB<br>CPU – 2-4 cores</td></tr>
<tr><td>Up to 1000</td><td>Minimum Requirements:<br>RAM - 64GB<br>CPU – 2.5Ghz Dual-socket, 4 Core<br><br>Suggested Requirements:<br>CPU – fastest available, Dual-socket maximum, disk IOPs is most critical. SSD should be considered.</td></tr>
</table>

*See* NetVault Backup Client and Server Sizing Guide 3.0.

32. 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, the Accused Instrumentalities perform block-level deduplication, which is a content dependent data compression encoder. As such, the Accused Instrumentalities disclose that the deduplication "technology eliminates redundant copies of data and in the process it decreases disk capacity requirements and reduces the bandwidth needed for data transfer." *See* Quest QoreStor 5.0 User Guide. As another example, the Accused Instrumentalities disclose that "the chunk is identified, a SHA 1 hash is generated and stored in the dedupe

dictionary. Any future occurrences of the data will be found, since the same chunk will be identified. The SHA1 hashes will match, and the data will be deduplicated." *See* Deduplication: The hidden truth and what it may be costing you.

33. The Accused Instrumentalities include a data server configured to select an encoder associated with the identified parameter, attribute, or value. For example, the Accused Instrumentalities select between deduplication or other compression. For example, the Accused Instrumentalities use "various data-reduction technologies, including advanced deduplication algorithms, in addition to the generic and custom compression solutions." *See* Quest QoreStor 5.0 User Guide. As another example, the Accused Instrumentalities disclose that the deduplication "technology eliminates redundant copies of data and in the process it decreases disk capacity requirements and reduces the bandwidth needed for data transfer." Moreover, the Accused Instrumentalities disclose that "the chunk is identified, a SHA 1 hash is generated and stored in the dedupe dictionary. Any future occurrences of the data will be found, since the same chunk will be identified. The SHA1 hashes will match, and the data will be deduplicated." *See* Deduplication: The hidden truth and what it may be costing you.

34. The Accused Instrumentalities include a data server configured to compress data in the data block with the selected encoder to produce a compressed data block, wherein the compression utilizes a state machine. For example, the Accused Instrumentalities use "various data-reduction technologies, including advanced deduplication algorithms, in addition to the generic and custom compression solutions." *See* Quest QoreStor 5.0 User Guide. As another example, the Accused Instrumentalities disclose that the deduplication "technology eliminates redundant copies of data and in the

process it decreases disk capacity requirements and reduces the bandwidth needed for data transfer." Moreover, the Accused Instrumentalities disclose that "the chunk is identified, a SHA 1 hash is generated and stored in the dedupe dictionary. Any future occurrences of the data will be found, since the same chunk will be identified. The SHA1 hashes will match, and the data will be deduplicated." *See* Deduplication: The hidden truth and what it may be costing you.

*35.* The Accused Instrumentalities include a data server configured to store the compressed data block. For example, the Accused Instrumentalities store data "in containers, which are stored in storage groups. Some containers function like a shared file system." *See* Quest QoreStor 5.0 User Guide. Moreover, the Accused Instrumentalities disclose that deduplication "eliminates redundant copies of data and in the process it decreases disk capacity requirements." *See* Quest QoreStor 5.0 User Guide. On information and belief, all of the Accused Instrumentalities include a data server configured to store the compressed data block in substantially the same way.

36. The time of the compressing the data block and the storing the compressed data block in the Accused Instrumentalities is less than the time of storing the data block in uncompressed form. Due to the data reduction and acceleration features of the specific compression algorithms used, the time of the compressing the data block and the storing the compressed data block is less than the time of storing the data block in uncompressed form. For example, the Accused Instrumentalities offer "advanced deduplication and compression capabilities to reduce the time and cost associated with backing up and restoring data." *See* Quest QoreStor 5.0 User Guide. As another example, the Accused Instrumentalities "accelerate backups, reduce storage requirements and costs, and replicate

faster and safer to the cloud for archiving and disaster recover." https://www.quest.com/products/netvault-backup/. *See also* https://www.quest.com/products/qorestor/ ("With QoreStor, you'll accelerate backup performance through protocol accelerators, reduce storage requirements and costs through content-aware, variable block deduplication, and replicate faster and safer to the cloud for data archiving and disaster recovery. . . . QoreStor replicates only unique data to the cloud so you can reduce the replication window by 10-15x, and lower network bandwidth requirements by 85%. . . . You can also accelerate data ingest by up to 20 terabytes per hour using QoreStor protocol accelerators, which speed write operations using optimized client-side deduplication, where only unique data chunks are sent over the LAN or WAN.").

37. On information and belief, Quest Software also infringes, directly and through induced infringement, and continues to infringe other claims of the '751 Patent.

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

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

40. As a result of Quest Software's infringement of the '751 Patent, Plaintiff Realtime is entitled to monetary damages in an amount adequate to compensate for Quest

Software's infringement, but in no event less than a reasonable royalty for the use made of the invention by Quest Software, together with interest and costs as fixed by the Court.

**COUNT III**
**INFRINGEMENT OF U.S. PATENT NO. 7,415,530**

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

42. Plaintiff Realtime is the owner by assignment of United States Patent No. 7,415,530 ("the '530 Patent") entitled "System and methods for accelerated data storage and retrieval." The '530 Patent was duly and legally issued by the United States Patent and Trademark Office on August 19, 2008. A true and correct copy of the '530 Patent is included as Exhibit C.

43. On information and belief, Quest Software has made, used, offered for sale, sold and/or imported into the United States Quest Software products that infringe the '530 Patent, and continues to do so. By way of illustrative example, these infringing products include, without limitation, Quest Software's products and services, e.g., NetVault Backup, Rapid Recovery, QoreStor, and all versions and variations thereof since the issuance of the '530 patent ("Accused Instrumentality"). Each of the accused functionalities operate in substantially similar manner at least with respect to the deduplication and compression functionalities described herein. *See, e.g.*, https://www.quest.com/products/rapid-recovery/ ("With Rapid Recovery, you get one advanced, admin-friendly solution — with all capabilities included. Plus, significantly reduce storage requirements and associated costs with built-in compression and deduplication;" https://www.quest.com/products/netvault-backup/ (a feature of NetVault Backup is "Data Deduplication and replication"). Further, NetVault Backup utilizes the QoreStor

technology described below for at least some its deduplication and compression functionality. https://www.quest.com/products/netvault-backup/ ("NetVault Backup is tightly integrated with Quest QoreStor™, a software-defined secondary storage platform. QoreStor helps accelerate backups, reduce storage requirements and costs, and replicate faster and safer to the cloud for archiving and disaster recovery. . . . Try our QoreStor dedupe calculator to see how much you can save on storage."; https://www.quest.com/documents/netvault-backup-datasheet-67999.pdf (referring to NetVault's "Quest QoreStorTM integration — Get direct-to-storage backup with this software-defined storage and data deduplication solution with client- side deduplication and compression — delivering significant performance improvements and greater storage efficiency.").

44. On information and belief, Quest Software has directly infringed and continues to infringe the '530 Patent, for example, through its own use and testing of the Accused Instrumentality, which constitutes a system comprising: a memory device; and a data accelerator, wherein said data accelerator is coupled to said memory device, a data stream is received by said data accelerator in received form, said data stream includes a first data block and a second data block, said data stream is compressed by said data accelerator to provide a compressed data stream by compressing said first data block with a first compression technique and said second data block with a second compression technique, said first and second compression techniques are different, said compressed data stream is stored on said memory device, said compression and storage occurs faster than said data stream is able to be stored on said memory device in said received form, a first data descriptor is stored on said memory device indicative of said first compression

technique, and said first descriptor is utilized to decompress the portion of said compressed data stream associated with said first data block. Upon information and belief, Quest Software uses the Accused Instrumentality, an infringing system, for its own internal non-testing business purposes, while testing the Accused Instrumentality, and while providing technical support and repair services for the Accused Instrumentality to Quest Software's customers.

45. On information and belief, Quest Software has had knowledge of the '530 Patent since at least the filing of this Complaint or shortly thereafter, and on information and belief, Quest Software knew of the '530 Patent and knew of its infringement, including by way of this lawsuit.

46. Upon information and belief, Quest Software's affirmative acts of making, using, and selling the Accused Instrumentalities, and providing implementation services and technical support to users of the Accused Instrumentalities, have induced and continue to induce users of the Accused Instrumentalities to use them in their normal and customary way to infringe Claim 1 of the '530 Patent by making or using a system comprising: a memory device; and a data accelerator, wherein said data accelerator is coupled to said memory device, a data stream is received by said data accelerator in received form, said data stream includes a first data block and a second data block, said data stream is compressed by said data accelerator to provide a compressed data stream by compressing said first data block with a first compression technique and said second data block with a second compression technique, said first and second compression techniques are different, said compressed data stream is stored on said memory device, said compression and storage occurs faster than said data stream is able to be stored on said memory device in

said received form, a first data descriptor is stored on said memory device indicative of said first compression technique, and said first descriptor is utilized to decompress the portion of said compressed data stream associated with said first data block.

47. For example, Quest Software explains to customers the benefits of using the Accused Instrumentality: "[I]n general, QoreStor offers advanced deduplication and compression capabilities to reduce the time and cost associated with backing up and restoring data. Based on deduplication and compression technology, QoreStor eliminates the need to maintain multiple copies of the same data. This lets customers keep more data online longer and reduce the need for tape backup dependency." *See* Quest QoreStor 5.0 User Guide

48. Quest Software also induces its customers to use the Accused Instrumentalities to infringe other claims of the '530 Patent. Quest Software specifically intended and was aware that these normal and customary activities would infringe the '530 Patent. Quest Software performed the acts that constitute induced infringement, and would induce actual infringement, with the knowledge of the '530 Patent and with the knowledge, or willful blindness to the probability, that the induced acts would constitute infringement. On information and belief, Quest Software engaged in such inducement to promote the use of the Accused Instrumentalities. Accordingly, Quest Software has induced and continues to induce users of the accused products to use the accused products in their ordinary and customary way to infringe the '530 Patent, knowing that such use constitutes infringement of the '530 Patent.

49. Quest Software also indirectly infringes the '530 Patent by manufacturing, using, selling, offering for sale, and/or importing the accused products, with knowledge

that the accused products were and are especially manufactured and/or especially adapted for use in infringing the ’530 Patent and are not a staple article or commodity of commerce suitable for substantial non-infringing use. On information and belief, the Accused Instrumentality is designed to function with compatible hardware to create a system comprising: a memory device; and a data accelerator, wherein said data accelerator is coupled to said memory device, a data stream is received by said data accelerator in received form, said data stream includes a first data block and a second data block, said data stream is compressed by said data accelerator to provide a compressed data stream by compressing said first data block with a first compression technique and said second data block with a second compression technique, said first and second compression techniques are different, said compressed data stream is stored on said memory device, said compression and storage occurs faster than said data stream is able to be stored on said memory device in said received form, a first data descriptor is stored on said memory device indicative of said first compression technique, and said first descriptor is utilized to decompress the portion of said compressed data stream associated with said first data block. Because the Accused Instrumentality is designed to operate as the claimed system for compressing, the Accused Instrumentality has no substantial non-infringing uses, and any other uses would be unusual, far-fetched, illusory, impractical, occasional, aberrant, or experimental. Quest Software’s manufacture, use, sale, offering for sale, and/or importation of the Accused Instrumentality constitutes contributory infringement of the ’530 Patent.

50. The Accused Instrumentality includes the memory device and includes the data accelerator, wherein said data accelerator is coupled to said memory device. For

example, the Accused Instrumentalities provide a table with minimum RAM and CPU requirements based on multiple factors.

| Number of Clients | Base NetVault Server | NetVault Server with RDA enabled plug-in installed | Catalog Search sizing additional recommended requirements |
|---|---|---|---|
| Up to 50 | Minimum Requirements:<br>RAM - 12GB<br>CPU – 2.5Ghz Dual-socket, 4 Core | If the VMware or Hyper-V plug-in is installed on the NetVault server then:<br>• Add an additional 4GB to 12GB of RAM to the server.<br>• Use caution when installing the VMware/Hyper-VM plug-in and the Bare Metal Recovery plug-ins on the NetVault server in larger environments.<br>• In some configurations the backup data will flow via the server that the plug-in is installed on. It is better to use multiple SmartClients/Clients on dedicated servers to distribute the backup load. | RAM – 1GB<br>CPU – 1 core |
| Up to 200 | Minimum Requirements:<br>RAM – 24GB<br>CPU – 2.5Ghz Dual-socket, 4 Core<br><br>Suggested Requirements:<br>CPU – 3.0Ghz, Dual-socket, 8 Core | | RAM – 1-to-12 GB<br>CPU – 1-2 cores |
| Up to 400 | Minimum Requirements:<br>RAM - 32GB<br>CPU – 2.5Ghz Dual-socket, 4 Core<br><br>Suggested Requirements:<br>CPU – 3.2Ghz, Dual-socket, 10 Core | | |
| Up to 700 | Minimum Requirements:<br>RAM - 48GB<br>CPU – 2.5Ghz Dual-socket, 4 Core | | RAM – 12-to-30GB<br>CPU – 2-4 cores |
| Up to 1000 | Minimum Requirements:<br>RAM - 64GB<br>CPU – 2.5Ghz Dual-socket, 4 Core<br><br>Suggested Requirements:<br>CPU – fastest available, Dual-socket maximum, disk IOPs is most critical. SSD should be considered. | | |

*See* NetVault Backup Client and Server Sizing Guide 3.0. As another example, the Accused Instrumentalities include a software solution that "can run on virtually any server hardware." https://www.quest.com/products/qorestor/. Moreover, the Accused Instrumentalities state that the software solution "delivers content-aware variable-block deduplication with built-in compression and encryption that delivers unparalleled storage savings." https://www.quest.com/products/qorestor/.

51. The Accused Instrumentality receives an incoming stream of data. For example, the Accused Instrumentality disclose that "the data is variable and is calculated over a sliding window, that same set of bytes of data (variable chunks of data) can be identified again and again, no matter where it is in the stream of data."

https://www.quest.com/docs/deduplication-the-hidden-truth-and-what-it-may-cost-you-technical-brief-26367.pdf.

52. The Accused Instrumentality received data stream comprise more than one data block. For example, the Accused Instrumentality provide variable-block deduplication. https://www.quest.com/products/qorestor/. As another example, the Accused Instrumentality disclose that "the data is variable and is calculated over a sliding window, that same set of bytes of data (variable chunks of data) can be identified again and again, no matter where it is in the stream of data."
https://www.quest.com/docs/deduplication-the-hidden-truth-and-what-it-may-cost-you-technical-brief-26367.pdf.

53. The Accused Instrumentality compresses said data stream to provide a compressed data stream by compressing said first data block with a first compression technique and said second data block with a second compression technique. For example, the Accused Instrumentalities use "various data-reduction technologies, including advanced deduplication algorithms, in addition to the generic and custom compression solutions." *See* Quest QoreStor 5.0 User Guide.

54. The first and second compression techniques used by the Accused Instrumentality described above are different. For example, the Accused Instrumentalities disclose that the deduplication "technology eliminates redundant copies of data and in the process it decreases disk capacity requirements and reduces the bandwidth needed for data transfer." *See* Quest QoreStor 5.0 User Guide. As another example, the Accused Instrumentalities disclose that "the chunk is identified, a SHA 1 hash is generated and stored in the dedupe dictionary. Any future occurrences of the data will be found, since the

same chunk will be identified. The SHA1 hashes will match, and the data will be deduplicated." *See* Deduplication: The hidden truth and what it may be costing you. Moreover, the Accused Instrumentalities rely on lossless data compression techniques such as LZW (Lempel-Ziv-Welch) compression to exploit "statistical redundancy without losing data." *See* Quest QoreStor 5.0 User Guide.

55. After compression, said compressed data stream is stored on said memory device. For example, the Accused Instrumentalities "create and manage containers, which store your backup and deduplicated data." *See* Quest QoreStor 5.0 User Guide. As another example, the Accused Instrumentalities display storage "savings in percentage (combining both deduplication and compression) over a time period (for example, every hour, which is the default)." *See* Quest QoreStor 5.0 User Guide.

56. Said compression and storage occurs faster than said data stream is able to be stored on said memory device in said received form. Due to the data reduction and acceleration features of the specific compression algorithms used, the time of the compressing the data block and the storing the compressed data block is less than the time of storing the data block in uncompressed form. For example, the Accused Instrumentalities offer "advanced deduplication and compression capabilities to reduce the time and cost associated with backing up and restoring data." *See* Quest QoreStor 5.0 User Guide. As another example, the Accused Instrumentalities "accelerate backups, reduce storage requirements and costs, and replicate faster and safer to the cloud for archiving and disaster recover." https://www.quest.com/products/netvault-backup/. *See also https://www.quest.com/products/qorestor/* ("With QoreStor, you'll accelerate backup performance through protocol accelerators, reduce storage requirements and costs through

content-aware, variable block deduplication, and replicate faster and safer to the cloud for data archiving and disaster recovery. . . . QoreStor replicates only unique data to the cloud so you can reduce the replication window by 10-15x, and lower network bandwidth requirements by 85%. . . . You can also accelerate data ingest by up to 20 terabytes per hour using QoreStor protocol accelerators, which speed write operations using optimized client-side deduplication, where only unique data chunks are sent over the LAN or WAN.").

57. The Accused Instrumentality stores a first data descriptor on said memory device indicative of said first compression technique.

58. On information and belief, Quest Software also infringes, directly and through induced infringement and contributory infringement, and continues to infringe other claims of the '530 Patent.

59. On information and belief, use of the Accused Instrumentality in its ordinary and customary fashion results in infringement of the methods claimed by the '530 Patent.

60. By making, using, offering for sale, selling and/or importing into the United States the Accused Instrumentalities, and touting the benefits of using the Accused Instrumentalities' compression features, Quest Software has injured Realtime and is liable to Realtime for infringement of the '530 Patent pursuant to 35 U.S.C. § 271.

61. As a result of Quest Software's infringement of the '530 Patent, Plaintiff Realtime is entitled to monetary damages in an amount adequate to compensate for Quest Software's infringement, but in no event less than a reasonable royalty for the use made of the invention by Quest Software, together with interest and costs as fixed by the Court.

## COUNT IV
## INFRINGEMENT OF U.S. PATENT NO. 9,116,908

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

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

64. On information and belief, Quest Software has offered for sale, sold and/or imported into the United States Quest Softwareproducts and services that infringe the '908 Patent, and continues to do so. By way of illustrative example, these infringing products and services include, without limitation, Quest Software'sproducts and services, *e.g.*, NetVault Backup, Rapid Recovery, QoreStor, and the system hardware on which they operate, and all versions and variations thereof since the issuance of the '908 Patent (the "Accused Instrumentality"). Each of the accused functionalities operate in substantially similar manner at least with respect to the deduplication and compression functionalities described herein. *See, e.g.*, https://www.quest.com/products/rapid-recovery/ ("With Rapid Recovery, you get one advanced, admin-friendly solution — with all capabilities included. Plus, significantly reduce storage requirements and associated costs with built-in compression and deduplication;" https://www.quest.com/products/netvault-backup/ (a feature of NetVault Backup is "Data Deduplication and replication"). Further, NetVault

Backup utilizes the QoreStor technology described below for at least some its deduplication and compression functionality. https://www.quest.com/products/netvault-backup/ ("NetVault Backup is tightly integrated with Quest QoreStor™, a software-defined secondary storage platform. QoreStor helps accelerate backups, reduce storage requirements and costs, and replicate faster and safer to the cloud for archiving and disaster recovery. . . . Try our QoreStor dedupe calculator to see how much you can save on storage."; https://www.quest.com/documents/netvault-backup-datasheet-67999.pdf (referring to NetVault's "Quest QoreStorTM integration — Get direct-to-storage backup with this software-defined storage and data deduplication solution with client- side deduplication and compression — delivering significant performance improvements and greater storage efficiency.").

65. On information and belief, Quest Software has directly infringed and continues to infringe the '908 Patent, for example, through its own use and testing of the Accused Instrumentality, which constitutes a system comprising: a memory device; and a data accelerator configured to compress: (i) a first data block with a first compression technique to provide a first compressed data block; and (ii) a second data block with a second compression technique, different from the first compression technique, to provide a second compressed data block; wherein the compressed first and second data blocks are stored on the memory device, and the compression and storage occurs faster than the first and second data blocks are able to be stored on the memory device in uncompressed form. Upon information and belief, Quest Softwareuses the Accused Instrumentality, an infringing system, for its own internal non-testing business purposes, while testing the

Accused Instrumentality, and while providing technical support and repair services for the Accused Instrumentality to Quest Software's customers.

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

67. On information and belief, Quest Software has had knowledge of the '908 Patent since at least the filing of this First Amended Complaint or shortly thereafter, and on information and belief, Quest Softwareknew of the '908 Patent and knew of its infringement, including by way of this lawsuit.

68. Upon information and belief, Quest Software's affirmative acts of making, using, and selling the Accused Instrumentalities, and providing implementation services and technical support to users of the Accused Instrumentalities, have induced and continue to induce users of the Accused Instrumentalities to use them in their normal and customary way to infringe Claim 1 of the '908 Patent by making or using a system comprising: a memory device; and a data accelerator configured to compress: (i) a first data block with a first compression technique to provide a first compressed data block; and (ii) a second data block with a second compression technique, different from the first compression technique, to provide a second compressed data block; wherein the compressed first and second data blocks are stored on the memory device, and the compression and storage occurs faster than the first and second data blocks are able to be stored on the memory device in uncompressed form. For example, Quest Softwareexplains to customers the benefits of using the Accused Instrumentalities, such as by touting their performance advantages: "[I]n general, QoreStor offers advanced deduplication and compression capabilities to reduce

the time and cost associated with backing up and restoring data. Based on deduplication and compression technology, QoreStor eliminates the need to maintain multiple copies of the same data. This lets customers keep more data online longer and reduce the need for tape backup dependency." *See* Quest QoreStor 5.0 User Guide. For similar reasons, Quest Softwarealso induces its customers to use the Accused Instrumentalities to infringe other claims of the '908 Patent. Quest Softwarespecifically intended and was aware that these normal and customary activities would infringe the '908 Patent. Quest Softwareperformed the acts that constitute induced infringement, and would induce actual infringement, with the knowledge of the '908 Patent and with the knowledge, or willful blindness to the probability, that the induced acts would constitute infringement. On information and belief, Quest Softwareengaged in such inducement to promote the sales of the Accused Instrumentalities. Accordingly, Quest Softwarehas induced and continues to induce users of the accused products to use the accused products in their ordinary and customary way to infringe the '908 Patent, knowing that such use constitutes infringement of the '908 Patent.

69. Quest Softwarealso indirectly infringes the '908 Patent by manufacturing, using, selling, offering for sale, and/or importing the accused products, with knowledge that the accused products were and are especially manufactured and/or especially adapted for use in infringing the '908 Patent and are not a staple article or commodity of commerce suitable for substantial non-infringing use. On information and belief, the Accused Instrumentality is designed to function as a system comprising: a memory device; and a data accelerator configured to compress: (i) a first data block with a first compression technique to provide a first compressed data block; and (ii) a second data block with a

second compression technique, different from the first compression technique, to provide a second compressed data block; wherein the compressed first and second data blocks are stored on the memory device, and the compression and storage occurs faster than the first and second data blocks are able to be stored on the memory device in uncompressed form. Because the Accused Instrumentality is designed to operate as the claimed system for compressing, the Accused Instrumentality has no substantial non-infringing uses, and any other uses would be unusual, far-fetched, illusory, impractical, occasional, aberrant, or experimental. Quest Software's manufacture, use, sale, offering for sale, and/or importation of the Accused Instrumentality constitutes contributory infringement of the '908 Patent.

70. The Accused Instrumentality includes a memory device and a data accelerator configured to compress: (i) a first data block with a first compression technique (e.g., deduplication) to provide a first compressed data block; and (ii) a second data block with a second compression technique (e.g., another compression), different from the first compression technique, to provide a second compressed data block. For example, the Accused Instrumentalities also use one or more memory devices, including, e.g., solid state drives (SSDs). For example, the Accused Instrumentalities provide a table with minimum RAM and CPU requirements based on multiple factors.

<table>
<tr><th>Number of Clients</th><th>Base NetVault Server</th><th>NetVault Server with RDA enabled plug-in installed</th><th>Catalog Search sizing additional recommended requirements</th></tr>
<tr><td>Up to 50</td><td>Minimum Requirements:<br>RAM - 12GB<br>CPU – 2.5Ghz Dual-socket, 4 Core</td><td rowspan="5">If the VMware or Hyper-V plug-in is installed on the NetVault server then:<ul><li>Add an additional 4GB to 12GB of RAM to the server.</li><li>Use caution when installing the VMware/Hyper-VM plug-in and the Bare Metal Recovery plug-ins on the NetVault server in larger environments.</li><li>In some configurations the backup data will flow via the server that the plug-in is installed on. It is better to use multiple SmartClients/Clients on dedicated servers to distribute the backup load.</li></ul></td><td>RAM – 1GB<br>CPU – 1 core</td></tr>
<tr><td>Up to 200</td><td>Minimum Requirements:<br>RAM – 24GB<br>CPU – 2.5Ghz Dual-socket, 4 Core<br><br>Suggested Requirements:<br>CPU – 3.0Ghz, Dual-socket, 8 Core</td><td>RAM – 1-to-12 GB<br>CPU – 1-2 cores</td></tr>
<tr><td>Up to 400</td><td>Minimum Requirements:<br>RAM - 32GB<br>CPU – 2.5Ghz Dual-socket, 4 Core<br><br>Suggested Requirements:<br>CPU – 3.2Ghz, Dual-socket, 10 Core</td><td></td></tr>
<tr><td>Up to 700</td><td>Minimum Requirements:<br>RAM - 48GB<br>CPU – 2.5Ghz Dual-socket, 4 Core</td><td>RAM – 12-to-30GB<br>CPU – 2-4 cores</td></tr>
<tr><td>Up to 1000</td><td>Minimum Requirements:<br>RAM - 64GB<br>CPU – 2.5Ghz Dual-socket, 4 Core<br><br>Suggested Requirements:<br>CPU – fastest available, Dual-socket maximum, disk IOPs is most critical. SSD should be considered.</td><td></td></tr>
</table>

*See* NetVault Backup Client and Server Sizing Guide 3.0. As another example, the Accused Instrumentalities include a software solution that "can run on virtually any server hardware." https://www.quest.com/products/qorestor/. Moreover, the Accused Instrumentalities state that the software solution "delivers content-aware variable-block deduplication with built-in compression and encryption that delivers unparalleled storage savings." https://www.quest.com/products/qorestor/. As another example, the Accused Instrumentalities use "various data-reduction technologies, including advanced deduplication algorithms, in addition to the generic and custom compression solutions." *See* Quest QoreStor 5.0 User Guide. As such, the Accused Instrumentalities disclose that the deduplication "technology eliminates redundant copies of data and in the process it decreases disk capacity requirements and reduces the bandwidth needed for data transfer." *See* Quest QoreStor 5.0 User Guide. Furthermore, the Accused Instrumentalities disclose

that "the chunk is identified, a SHA 1 hash is generated and stored in the dedupe dictionary. Any future occurrences of the data will be found, since the same chunk will be identified. The SHA1 hashes will match, and the data will be deduplicated." *See* Deduplication: The hidden truth and what it may be costing you. Moreover, the Accused Instrumentalities rely on lossless data compression techniques such as LZW (Lempel-Ziv-Welch) compression to exploit "statistical redundancy without losing data." *See* Quest QoreStor 5.0 User Guide.

71. The Accused Instrumentality stores the compressed first and second data blocks on the memory device. For example, the Accused Instrumentalities "create and manage containers, which store your backup and deduplicated data." *See* Quest QoreStor 5.0 User Guide. As another example, the Accused Instrumentalities display storage "savings in percentage (combining both deduplication and compression) over a time period (for example, every hour, which is the default)." *See* Quest QoreStor 5.0 User Guide. The compression and storage occurs faster than the first and second data blocks are able to be stored on the memory device in uncompressed form. Due to the data reduction and acceleration features of the specific compression algorithms used, the time of the compressing the data block and the storing the compressed data block is less than the time of storing the data block in uncompressed form. For example, the Accused Instrumentalities offer "advanced deduplication and compression capabilities to reduce the time and cost associated with backing up and restoring data." *See* Quest QoreStor 5.0 User Guide. As another example, the Accused Instrumentalities "accelerate backups, reduce storage requirements and costs, and replicate faster and safer to the cloud for archiving and disaster recover." https://www.quest.com/products/netvault-backup/. *See also https://www.quest.com/products/qorestor/* ("With QoreStor, you'll accelerate backup

performance through protocol accelerators, reduce storage requirements and costs through content-aware, variable block deduplication, and replicate faster and safer to the cloud for data archiving and disaster recovery. . . . QoreStor replicates only unique data to the cloud so you can reduce the replication window by 10-15x, and lower network bandwidth requirements by 85%. . . . You can also accelerate data ingest by up to 20 terabytes per hour using QoreStor protocol accelerators, which speed write operations using optimized client-side deduplication, where only unique data chunks are sent over the LAN or WAN.").

72. On information and belief, Quest Softwarealso infringes, directly and through induced infringement, and continues to infringe other claims of the '908 Patent.

73. By making, using, offering for sale, selling and/or importing into the United States the Accused Instrumentalities, and touting the benefits of using the Accused Instrumentalities' compression features, Quest Softwarehas injured Realtime and is liable to Realtime for infringement of the '908 Patent pursuant to 35 U.S.C. § 271.

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

## PRAYER FOR RELIEF

WHEREFORE, Plaintiff Realtime respectfully requests that this Court enter:

a. A judgment in favor of Plaintiff that Quest Softwarehas infringed, either literally and/or under the doctrine of equivalents, the '728 Patent, the '751 Patent, the '530 Patent, and the '908 Patent;

b. A permanent injunction prohibiting Quest Softwarefrom further acts of infringement of the ’728 Patent, the ’751 Patent, the ’530 Patent, and the ’908 Patent;

c. A judgment and order requiring Quest Softwareto pay Plaintiff its damages, costs, expenses, and prejudgment and post-judgment interest for its infringement of the ’728 Patent, the ’751 Patent, the ’530 Patent, and the ’908 Patent; and

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

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

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

## DEMAND FOR JURY TRIAL

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

Dated: April 29, 2019

BAYARD, P.A.

/s/ Stephen B. Brauerman
Stephen B. Brauerman (No. 4952)
Sara E. Bussiere (No. 5725)
600 N. King Street, Suite 400
Wilmington, DE 19801
Phone: (302) 655-5000
sbrauerman@bayardlaw.com
sbussiere@bayardlaw.com

*Attorneys for Plaintiff Realtime Data LLC d/b/a IXO*

OF COUNSEL

Marc A. Fenster
Reza Mirzaie
Paul A. Kroeger
C. Jay Chung
RUSS AUGUST & KABAT
12424 Wilshire Boulevard, 12th Floor
Los Angeles, CA 90025
(310) 826-7474
mfenster@raklaw.com
rmirzaie@raklaw.com

pkroeger@raklaw.com
jchung@raklaw.com