

WHAT IS CLAIMED IS:

1. A system, comprising:

one or more computers configured to implement a block storage service, wherein the
5 block storage service comprises:

a block-level storage for storing data from a computing instance for a user;

an interface configured to allow said user to specify respective destinations for
storing backup copies of respective data stored in the block-level storage
for said user, wherein at least some of the respective destinations are for
10 different storage systems remote from one another;

a backup copy function for creating backup copies of data stored in said block-
level storage by said computing instance for said user, and storing the
backup copies in different destination locations specified by said user via
said interface.

2. The system of claim 1, wherein:

the block-level storage is further configured for storing data from a plurality of distinct
computing instances for a plurality of distinct users;

the interface is further configured to allow said plurality of distinct users to specify said
20 respective destinations for storing said backup copies of said respective data
stored in the block-level storage for said plurality of distinct users; and

the backup copy function is further configured for creating backup copies of data stored
in said block-level storage for said plurality of distinct users, and storing the
backup copies in different destination locations specified by respective ones of
25 said plurality of distinct users via said interface.

3. The system of claim 2, wherein the block-level storage stores one or more block-
level storage volumes each attached to at least one of said plurality of distinct computing
instances, and wherein the block storage service is further configured to create point-in-time
30 snapshots of the one or more block-level storage volumes, wherein said backup copies are copies
of the point-in-time snapshots.

4. The system of claim 2, wherein said interface is further configured to allow a
given one of said plurality of distinct users to specify multiple distinct destinations for storing

backup copies of data stored for said given one of said plurality of distinct users in said block-level storage.

5 5. The system of claim 2, wherein one of the respective destinations is for a storage system operated by a same entity as the block storage service, and another one of the respective destinations is for a storage system operated by a different entity.

10 6. The system of claim 2, wherein said block storage service is configured to store the backup copies to the respective destinations according to a common application programming interface (API).

 7. The system of claim 2, wherein said block storage service is configured to store the backup copies to the respective destinations according to different APIs.

15 8. The system of claim 7, wherein the block storage service is further configured to receive from said particular user a pluggable module for storing data to the particular destination, wherein said pluggable module performs storage operations according to a storage API for the particular destination.

20 9. A method, comprising:
receiving, by a block storage service, input specifying a particular importation location
from which to retrieve a snapshot copy of a storage volume;
retrieving, by the block storage service, the snapshot copy from the particular importation
location;
25 based on the snapshot copy, creating or restoring a block-level storage volume in block-level storage of the block storage service;
providing the block-level storage volume to a particular user of a plurality of distinct users;
repeating said receiving, said retrieving, said creating or restoring, and said providing for
30 another snapshot copy from a different importation location for another one of the plurality of distinct users.

 10. The method of Claim 9, wherein the providing the block storage volume to a particular user of a plurality of distinct users further comprises providing the block storage
35 volume to a computing instance for the particular user among the plurality of distinct users.

11. The method of claim 10, wherein the retrieving, by the block storage service, the snapshot copy from the particular importation location further comprises:

5 retrieving selected data from the particular importation location in response to a request received from the computing instance to read the selected data from the block-level storage volume; and
retrieving non-selected data from the particular importation location.

12. The method of claim 11, wherein the retrieving the non-selected data from the
10 particular importation location further comprises retrieving the non-selected data from the particular importation location in an order determined to represent a pattern of expected requests.

13. The method of claim 11, wherein the providing the block-level storage volume to the computing instance further comprises providing the selected data prior to completion of the
15 retrieving the non-selected data.

14. The method of claim 10, wherein the particular importation location is for a storage system operated by a same entity as the block storage service, and the different importation location is for a storage system operated by a different entity.
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15. The method of Claim 10, further comprising receiving from a particular user associated with said input an interface module for retrieving data from the particular importation location, wherein said interface module performs retrieval operations according to a storage API for the particular importation location.
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WHAT IS CLAIMED IS:

1. A system, comprising:

one or more computers configured to implement a network-based block storage service, wherein the network-based block storage service comprises:

a block-level storage for storing data received over a network from a plurality of distinct users of distinct computing instances, wherein the distinct computing instances execute in a network-based computing virtualization environment, and

the network-based block storage service provides a portion of the block-level storage for access to respective ones of the distinct computing instances as respective virtual block storage devices;

a network-based interface configured to allow said plurality of distinct users to specify respective destinations for storing backup copies of respective data stored in the block-level storage for said plurality of distinct users, wherein at least some of the respective destinations are for different storage systems remote from one another and remote from the block-level storage; and

a backup copy function for creating backup copies of data stored in said block-level storage by said plurality of distinct computing instances for said plurality of distinct users, and storing the backup copies over a network to different destination locations specified by said plurality of distinct users via said network-based interface.

2. The system of claim 1, wherein the block-level storage stores one or more block-level storage volumes each attached to at least one of said plurality of distinct computing instances, and wherein the network-based block storage service is further configured to create point-in-time snapshots of the one or more block-level storage volumes, wherein said backup copies are copies of the point-in-time snapshots.

3. The system of claim 1, wherein said interface is further configured to allow a given one of said plurality of distinct users to specify multiple distinct destinations for storing backup copies of data stored for said given one of said plurality of distinct users in said block-level storage.

4. The system of claim 1, wherein one of the respective destinations is for a storage system operated by a same entity as the network-based block storage service, and another one of the respective destinations is for a storage system operated by a different entity.

5. The system of claim 1, wherein said network-based block storage service is configured to store the backup copies to the respective destinations according to a common application programming interface (API).

6. The system of claim 1, wherein said network-based block storage service is configured to store the backup copies to the respective destinations according to different APIs.

7. The system of claim 6, wherein the network-based block storage service is further configured to receive from said particular user a pluggable module for storing data to the particular destination, wherein said pluggable module performs storage operations according to a storage API for the particular destination.

8. A method, comprising:

receiving, by a network-based block storage service, input specifying a particular importation location from which to retrieve a snapshot copy of a storage volume;

retrieving, by the network-based block storage service, the snapshot copy from the particular importation location;

based on the snapshot copy, creating or restoring a block-level storage volume in block-level storage of the network-based block storage service;

providing the block-level storage volume to a particular user of a plurality of distinct users of distinct computing instances, wherein the distinct computing instances execute in a network-based computing virtualization environment, and

the network-based block storage service provides a portion of the block-level storage for access to respective ones of the distinct computing instances as respective virtual block storage devices; and

repeating, by the same network-based block storage service, said receiving, said retrieving, said creating or restoring, and said providing for another snapshot copy from a different importation location for another one of the plurality of distinct users, wherein the different importation location is remote from the particular importation location and the block-level storage.

9. The method of claim 8, wherein the retrieving, by the same network-based block storage service, the snapshot copy from the particular importation location further comprises:

retrieving selected data from the particular importation location in response to a request received from the computing instance to read the selected data from the block-level storage volume; and

retrieving non-selected data from the particular importation location.

10. The method of claim 9, wherein the retrieving the non-selected data from the particular importation location further comprises retrieving the non-selected data from the particular importation location in an order determined to represent a pattern of expected requests.

11. The method of claim 9, wherein the providing the block-level storage volume to the computing instance further comprises providing the selected data prior to completion of the retrieving the non-selected data.

12. The method of claim 8, wherein the particular importation location is for a storage system operated by a same entity as the block storage service, and the different importation location is for a storage system operated by a different entity.

13. The method of Claim 8, further comprising receiving from a particular user associated with said input an interface module for retrieving data from the particular importation location, wherein said interface module performs retrieval operations according to a storage API for the particular importation location.