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(54) Title: SIMULTANEOUS STATE-BASED CRYPTOGRAPHIC SPLITTING IN A SECURE STORAGE APPLIANCE

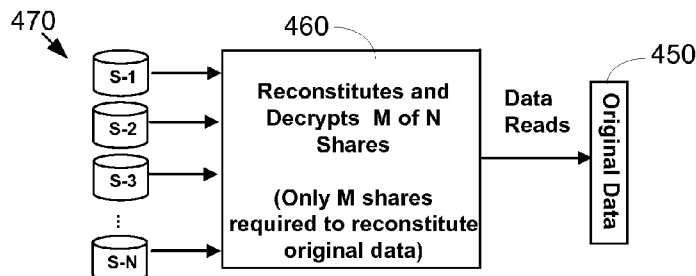


FIG. 9

(57) Abstract: Methods and systems for managing data blocks and I/O requests are provided. One method is a method of managing data blocks in a secure storage appliance. The method includes receiving a block of data associated with a volume, the volume associated with a plurality of shares stored on a plurality of physical storage devices, and storing the block of data in a buffer. The method also includes associating the block of data with a state from among a plurality of states, each of the states corresponding to a status of the block of data. The method further includes processing the block of data by performing at least one cryptographic operation on the block of data, and upon completion of processing the block of data, updating the state of the block of data.

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A. CLASSIFICATION OF SUBJECT MATTER

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ADD.

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

G06F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2007/160198 A1 (ORSINI RICK [US] ET AL) 12 July 2007 (2007-07-12) paragraph [0483] - paragraph [0492]; figures 30-32 ----- -/--	1-23



Further documents are listed in the continuation of Box C.



See patent family annex.

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- "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
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INTERNATIONAL SEARCH REPORT

International application No

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C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>SCHNITZER S A ET AL: "Secured storage using secureParser" [Online] 1 January 2005 (2005-01-01), STORAGESS'05. PROCEEDINGS OF THE 2005 ACM WORKSHOP ON STORAGE SECURITY AND SURVIVABILITY; [PROCEEDINGS OF THE ACM WORKSHOP ON STORAGE SECURITY AND SURVIVABILITY. STORAGESS], NEW YORK, NY : ACM, US, PAGE(S) 135 - 140 , XP002582438 ISBN: 978-1-59593-233-4 Retrieved from the Internet: URL:http://delivery.acm.org/10.1145/1110000/1103801/p135-schnitzer.pdf?key1=1103801&key2=6709743721&coll=GUIDE&dl=GUIDE&CFID=87774082&CFTOKEN= 51146011> [retrieved on 2010-05-10] page 136, left-hand column, line 13 - page 138, left-hand column, line 6</p>	1-23
A	<p>US 2008/183975 A1 (FOSTER LYNN [US] ET AL) 31 July 2008 (2008-07-31) figure 1</p>	1-23

INTERNATIONAL SEARCH REPORT

Information on patent family members

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