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- (58) **Field of Classification Search**  
None  
See application file for complete search history.

- (56)
- References Cited**

- U.S. PATENT DOCUMENTS

- |           |      |         |                 |                       |
|-----------|------|---------|-----------------|-----------------------|
| 6,301,668 | B1 * | 10/2001 | Gleichauf ..... | H04L 41/12<br>726/22  |
| 6,301,699 | B1 * | 10/2001 | Hollander ..... | G06F 21/55<br>717/131 |

- (Continued)

- ## OTHER PUBLICATIONS

- Chang, Edward S., et al. "Managing cyber security vulnerabilities in large networks." Bell Labs technical journal 4.4 (1999): 252-272. (Year: 1999).\*

- (Continued)

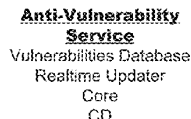
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- (57) **ABSTRACT**

- A system, method, and computer program product are provided for a database associating a plurality of device vulnerabilities to which computing devices can be subject with a plurality of remediation techniques that collectively remediate the plurality of device vulnerabilities. Each of the device vulnerabilities is associated with at least one remediation technique. Each remediation technique associated with a particular device vulnerability remediates that particular vulnerability. Further, each remediation technique has a remediation type are selected from the type group consisting of patch, policy setting, and configuration option. Still yet, a first one of the device vulnerabilities is associated with at least two alternative remediation techniques.

**70 Claims, 12 Drawing Sheets**



**Related U.S. Application Data**

- continuation of application No. 14/499,230, filed on Sep. 28, 2014, now Pat. No. 9,100,431, which is a continuation-in-part of application No. 14/138,014, filed on Dec. 21, 2013, now Pat. No. 9,117,069, which is a continuation of application No. 10/882,852, filed on Jul. 1, 2004, now abandoned.
- (60) Provisional application No. 60/484,085, filed on Jul. 1, 2003.
- (51) **Int. Cl.**  
**G06F 21/55** (2013.01)  
**G06F 21/50** (2013.01)
- (52) **U.S. Cl.**  
CPC ..... **G06F 21/554** (2013.01); **G06F 21/57** (2013.01); **G06F 21/577** (2013.01); **H04L 63/02** (2013.01); **H04L 63/0227** (2013.01); **H04L 63/14** (2013.01); **H04L 63/145** (2013.01); **H04L 63/1408** (2013.01); **H04L 63/1416** (2013.01); **H04L 63/1441** (2013.01); **H04L 63/20** (2013.01); **H04L 63/0263** (2013.01)

(56) **References Cited**

U.S. PATENT DOCUMENTS

6,415,321 B1 \* 7/2002 Gleichauf ..... H04L 41/00  
709/224  
6,550,012 B1 \* 4/2003 Villa ..... H04L 63/0218  
713/168  
6,990,660 B2 \* 1/2006 Moshir ..... G06F 8/62  
709/223  
7,152,105 B2 \* 12/2006 McClure ..... H04L 41/12  
709/224

7,181,769 B1 \* 2/2007 Keanini ..... H04L 63/1416  
713/166  
7,257,630 B2 \* 8/2007 Cole ..... G02B 5/3083  
709/224  
7,509,681 B2 \* 3/2009 Flowers ..... G06F 21/552  
713/151  
7,712,138 B2 \* 5/2010 Zobel ..... G06F 21/577  
709/224  
2003/0126472 A1 \* 7/2003 Banzhof ..... G06F 21/577  
726/25  
2003/0204632 A1 \* 10/2003 Willebeek-LeMair .....  
H04L 29/06  
709/249  
2005/0193430 A1 \* 9/2005 Cohen ..... G06F 21/577  
726/25  
2005/0235360 A1 \* 10/2005 Pearson ..... H04L 29/06  
726/23  
2006/0101517 A1 \* 5/2006 Banzhof ..... G06F 21/577  
726/25  
2007/0011319 A1 \* 1/2007 McClure ..... G02B 6/105  
709/224

OTHER PUBLICATIONS

Action Summary for U.S. Appl. No. 14/834,102 dated Aug. 24, 2018.  
Action Summary for U.S. Appl. No. 15/608,981 dated Nov. 05, 2018.  
Action Summary for U.S. Appl. No. 15/608,983 dated Sep. 11, 2018.  
Notice of Allowance for U.S. Appl. No. 15/608,983 dated Feb. 4, 2019.  
Notice of Appeal Filed Nov. 25, 2019 for U.S. Appl. No. 15/608,981.  
Advisory Action Filed Aug. 13, 2019 for U.S. Appl. No. 15/608,981.  
Notice of Allowance dated Sep. 24, 2019 for U.S. Appl. No. 15/608,983.

\* cited by examiner

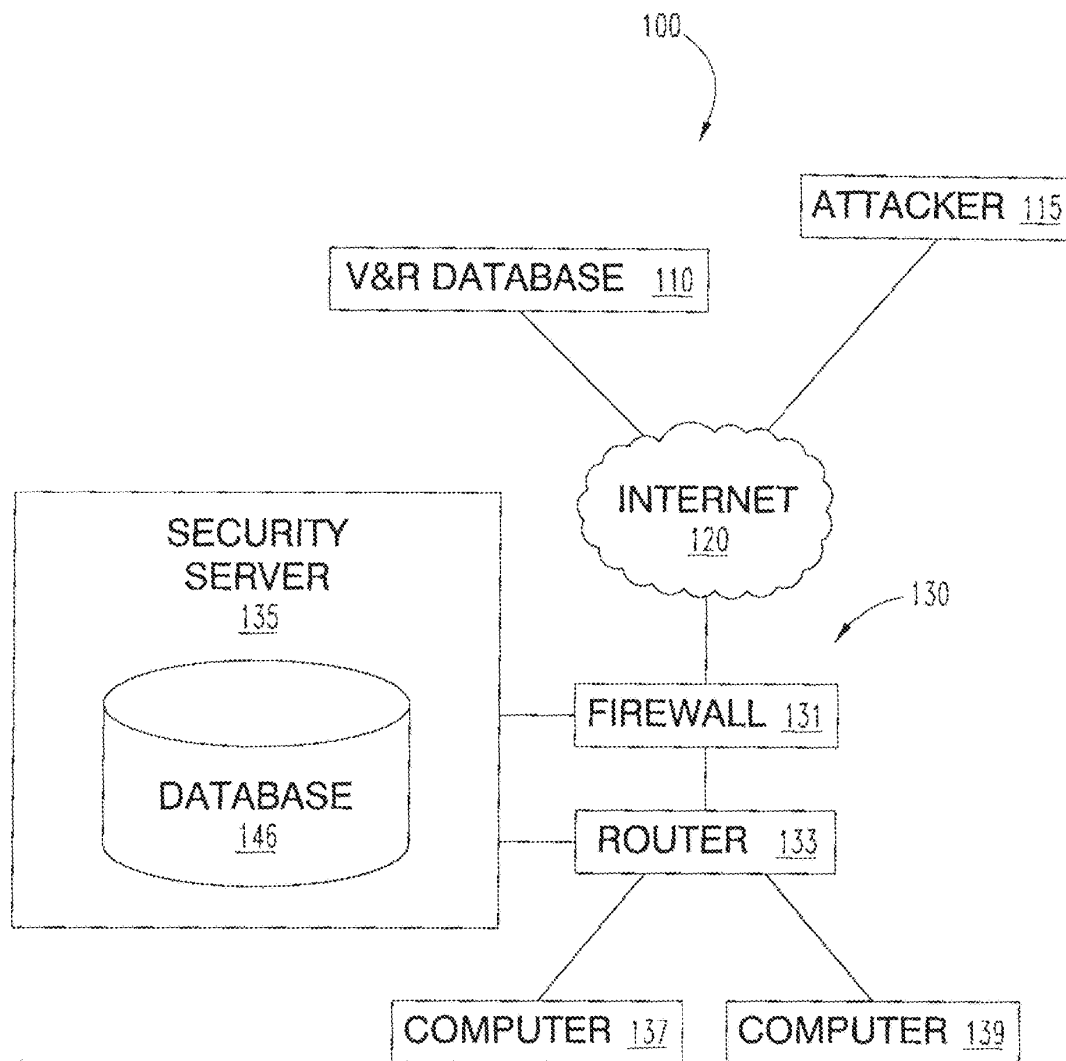


FIG. 1

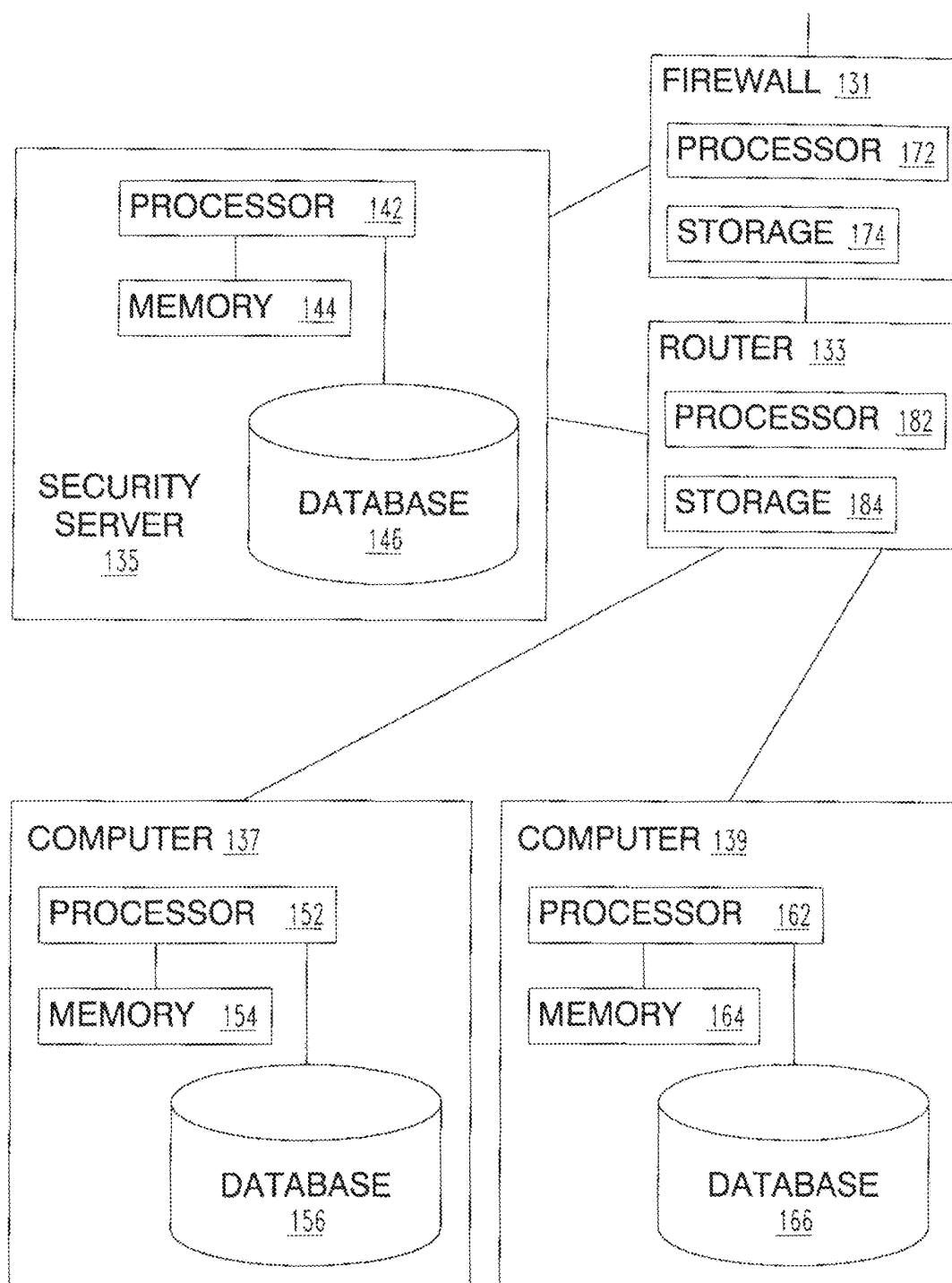


FIG. 2

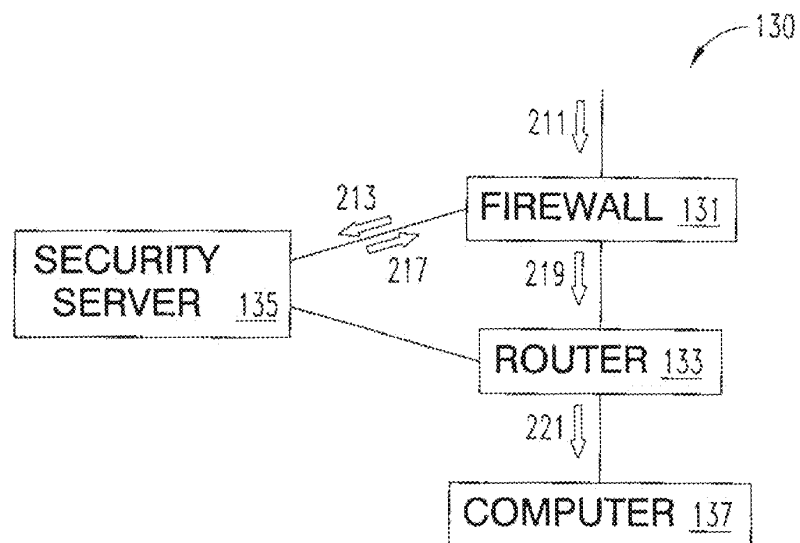


FIG. 3

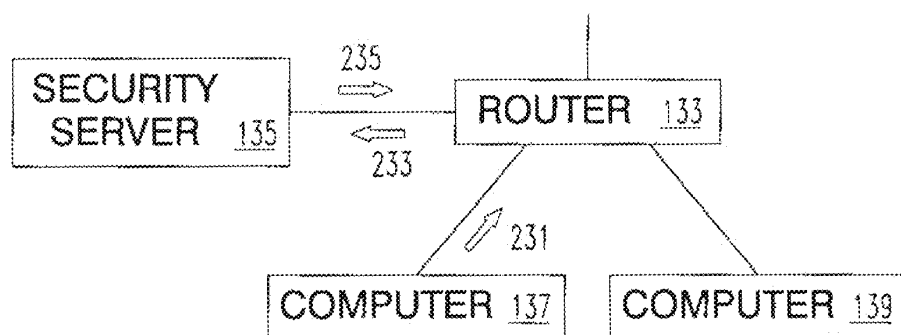


FIG. 4

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