



(51) International Patent Classification:

G06F 12/16 (2006.01) G06F 3/06 (2006.01)
G06F 12/08 (2006.01)

(21) International Application Number:

PCT/US2012/042107

(22) International Filing Date:

13 June 2012 (13.06.2012)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

13/163,760 20 June 2011 (20.06.2011) US

(71) Applicant (for all designated States except US): MICROSOFT CORPORATION [US/US]; One Microsoft Way, Redmond, Washington 98052-6399 (US).

(72) Inventors: CHIRUVOLU, Phani; c/o Microsoft Corporation, LCA - International Patents, One Microsoft Way, Redmond, Washington 98052-6399 (US). SINHA, Gaurav; c/o Microsoft Corporation, LCA - International Patents, One Microsoft Way, Redmond, Washington 98052-6399 (US). SINGH, Devdeep; c/o Microsoft Corporation, LCA - International Patents, One Microsoft Way, Redmond, Washington 98052-6399 (US). OSHINS, Jacob; c/o Microsoft Corporation, LCA - International Patents, One Microsoft Way, Redmond, Washington 98052-

6399 (US). ECK, Christopher L.; c/o Microsoft Corporation, LCA - International Patents, One Microsoft Way, Redmond, Washington 98052-6399 (US).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declarations under Rule 4.17:

— as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))

[Continued on next page]

(54) Title: MANAGING REPLICATED VIRTUAL STORAGE AT RECOVERY SITES

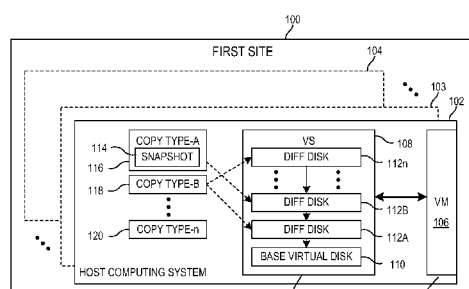


FIG. 1

(57) Abstract: Techniques involving replication of storage are described. A representative technique includes apparatuses and methods for receiving replicated virtual storage of a replicated virtual machine, including at least a replicated base virtual disk that substantially corresponds to a primary base virtual disk to be replicated. Copies of differencing disks or other forms of virtual storage updates are received at a recovery site, each of the differencing disks being associated with the primary base virtual disk as descendants thereof. The received copies of the differencing disks are arranged relative to the replicated base virtual disk corresponding to the manner in which the differencing disks were arranged relative to the primary base virtual disk, thereby maintaining the data view of the replicated virtual machine in synchronization with the virtual machine at the primary site.



- *as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))* — *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))*

Published:

- *with international search report (Art. 21(3))*

(88) Date of publication of the international search report:

21 March 2013