

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
15 August 2024 (15.08.2024)



(10) International Publication Number
WO 2024/167418 A1

(51) International Patent Classification:
G06F 9/50 (2006.01)

(21) International Application Number:

PCT/NO2024/050031

(22) International Filing Date:

12 February 2024 (12.02.2024)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

20230136

10 February 2023 (10.02.2023)

NO

(71) Applicant: **GREEN DATA CENTER TECHNOLOGIES AS** [NO/NO]; Gosenstien 17B, 4041 Hafrsfjord (NO).

(72) Inventors: **RETTEDAL, Richard**; Porsahagen 6, 4316 Sandnes (NO). **KNUDSEN, Bjørn**; Gosenstien 17B, 4041

Hafrsfjord (NO). **BIRKELAND, Christopher**; Tastatunet 8, 4027 Stavanger (NO). **CHAUNCY-LIE, Matt**; Muségata 73, 4010 Stavanger (NO).

(74) Agent: **HÅMSØ PATENTBYRÅ AS**; P.O. Box 9, 4068 Stavanger (NO).

(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, BN, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CV, CZ, DE, DJ, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IQ, IR, IS, IT, JM, JO, JP, KE, KG, KH, KN, KP, KR, KW, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, MG, MK, MN, MU, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA, SC, SD, SE, SG, SK, SL, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, WS, ZA, ZM, ZW.

(54) Title: SYSTEM FOR AND METHOD OF HARNESSING HEAT GENERATED FROM RUNNING AT LEAST ONE VIRTUAL OPERATIVE SYSTEM INSTANCE

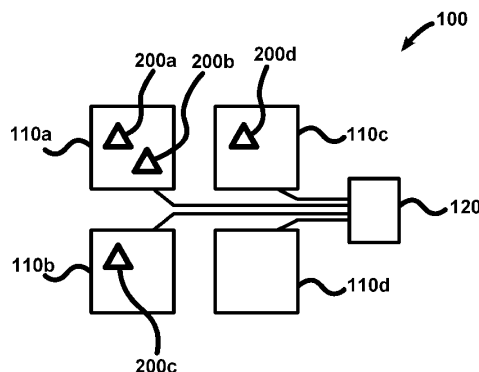


Fig. 1

(57) Abstract: Disclosed are systems for and methods of harnessing heat generated from running virtual operative system instances. A system may include: host computers for running the virtual operative system instances, the host computers being networked; and a subsystem for harnessing heat generated by the host computers. One or more of the host computers may be configured to operate as a controller. Alternatively, a separate controller computer may be provided. The controller or controller computer is configured with the steps of: for each instance, estimating a heat rate that will result from running the instance as a guest of a host computer; calculating an arrangement of the instances over the host computers so that a heat rate achieved by the host computers is maximized; and controlling the host computers to run the instances as defined in the calculated arrangement.

[Continued on next page]

(84) Designated States (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, CV, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SC, SD, SL, ST, 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, ME, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, KM, ML, MR, NE, SN, TD, TG).

Published:

— with international search report (Art. 21(3))