



- (51) **International Patent Classification:**
G06F 9/44 (2006.01) *G06F 15/16* (2006.01)
- (21) **International Application Number:**
PCT/US2011/053370
- (22) **International Filing Date:**
27 September 2011 (27.09.2011)
- (25) **Filing Language:** English
- (26) **Publication Language:** English
- (30) **Priority Data:**
12/908,653 20 October 2010 (20.10.2010) US
- (71) **Applicant** (for all designated States except US): **MICROSOFT CORPORATION** [US/US]; One Microsoft Way, Redmond, Washington 98052-6399 (US).
- (72) **Inventors:** **HOPMANN, Alexander**; c/o Microsoft Corporation, LCA - International Patents, One Microsoft Way, Redmond, Washington 98052-6399 (US). **ROSENFELD, Zach**; c/o Microsoft Corporation, LCA - International Patents, One Microsoft Way, Redmond, Washington 98052-6399 (US). **WINDLE, Marc Keith**; c/o Mi-

crosoft Corporation, LCA - International Patents, One Microsoft Way, Redmond, Washington 98052-6399 (US). **BAR-CASPI, Doron**; c/o Microsoft Corporation, LCA - International Patents, One Microsoft Way, Redmond, Washington 98052-6399 (US). **JENKINS, Joshua Calvin**; c/o Microsoft Corporation, LCA - International Patents, One Microsoft Way, Redmond, Washington 98052-6399 (US). **DAUPHINY, Michelle Lee**; c/o Microsoft Corporation, LCA - International Patents, One Microsoft Way, Redmond, Washington 98052-6399 (US). **LUK, Jonathan**; 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,

[Continued on next page]

- (54) **Title:** WEB SERVICE PATTERNS FOR GLOBALLY DISTRIBUTED SERVICE FABRIC

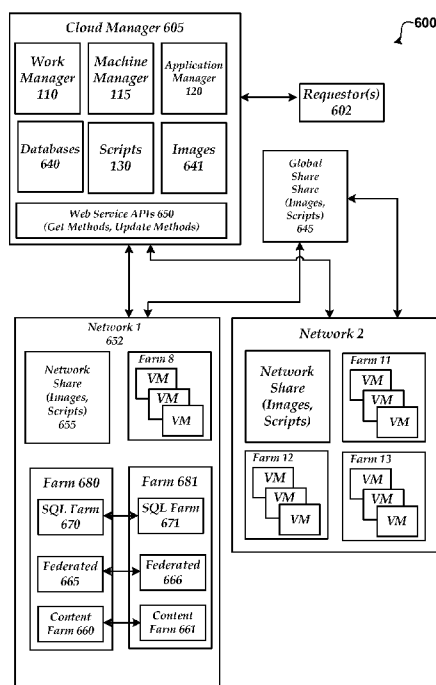


Fig. 6

- (57) **Abstract:** An idempotent and asynchronous application programming interface (API) that can not rely on a reliable network is used by a cloud manager to receive and process requests. The cloud manager system is a central coordination service that receives requests using the API to perform update operations and get operations relating to the online service. For example, the API includes methods for deploying machines, updating machines, removing machines, performing configuration changes on servers, Virtual Machines (VMs), as well as performing other tasks relating to the management of the online service. Receiving and processing a same API call multiple times results in a same result.



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, MD, 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))
- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))

Published:

- without international search report and to be republished upon receipt of that report (Rule 48.2(g))