

PCT Recordation of Search History

Case/PCT Application Number: PCT/US18/45238

CLIN Number/Technical Field of PCT Application: 3

Dates During Which the Search was Conducted: 21 September 2018 - 23 September 2018

Date of Completion of Recordation of Search History Form: 23 September 2018

Research Analyst Initials: OVM

Search Approval Official (SAO) Initials: HKP

Field of Search/Classification Information:

IPC(8) Classifications: G06F 9/45, 21/31; G06Q 10/06 (2018.01)

CPC Classifications: G06F 9/455, 21/31; G06Q 10/06; H04L 43/50, 41/0823

Databases Searched (Patent and Non-Patent Literature (NPL), Including Sub-Databases and Files Searched) and Search Terms Used:

PatSeer (US, EP, WO, JP, DE, GB, CN, FR, KR, ES, AU, IN, CA, Other Countries (INPADOC), RU, AT, CH, TH, BR, PH); IEEE/IEEEExplore; Google/Google Scholar; IP.com

Keywords: request, update, change, infrastructure, architecture, replicate, VM, cloud, security, test, detect, cyber, threat, remediate, isolate, unify, federate, orchestrate, rollback, instance

Database Search String Recordation, Including Dates of Searches:**Patent Database Search Strategy/Results:**

Patseer (23 September 2018)

ID	Search String	Deduped	Records	Created Date
L26	L24 NOT L25	ALL	25	2-Sep-18
L25	TACD:((fail* OR threat*) AND detect* AND ((chang* OR updat*) w4 (infrastructur* OR architectur*)) AND (remed* OR eliminat* OR isolat* OR remov*) AND (replicat* OR duplicat* OR mirror* OR copy* OR copie* OR instantiat* OR instance*) AND request* AND resource* AND virtual* AND (roll_back* OR (roll* w1 back)) AND orchestrat* AND (federat* OR unif*)) AND CPC:(G06F* OR G06Q* OR H04L*)	ALL	136	2-Sep-18
L24	TACD:((fail* OR threat*) AND detect* AND ((chang* OR updat*) w4 (infrastructur* OR architectur*)) AND (remed* OR eliminat* OR isolat* OR remov*) AND (replicat* OR duplicat* OR mirror* OR copy* OR copie* OR instantiat* OR instance*) AND request* AND resource* AND virtual* AND (roll_back* OR (roll* w1 back)) AND orchestrat*) AND CPC:(G06F* OR G06Q* OR H04L*)	ALL	161	2-Sep-18
L23	TACD:((fail* OR threat*) AND detect* AND ((chang* OR updat*) w4 (infrastructur* OR architectur*)) AND (remed* OR eliminat* OR isolat* OR remov*) AND (replicat* OR duplicat* OR mirror* OR copy* OR copie* OR instantiat* OR instance*) AND request* AND resource* AND virtual* AND (roll_back* OR (roll* w1 back))) AND CPC:(G06F* OR G06Q* OR H04L*)	ALL	1231	2-Sep-18
L22	TACD:((fail* OR threat*) AND detect* AND (chang* OR updat*) AND (remed* OR eliminat* OR isolat* OR remov*) AND (replicat* OR duplicat* OR mirror* OR copy* OR copie* OR instantiat* OR instance*) AND request* AND resource* AND virtual* AND	ALL	8100	2-Sep-18

	(roll_back* OR (roll* w1 back)) AND (infrastructur* OR architectur*) AND CPC:(G06F* OR G06Q* OR H04L*)			
L21	TACD:((fail* OR threat*) AND detect* AND (chang* OR updat*) AND (remed* OR eliminat* OR isolat* OR remov*) AND (replicat* OR duplicat* OR mirror* OR copy* OR copie* OR instantiat* OR instance*) AND request* AND resource* AND virtual* AND (roll_back* OR (roll* w1 back))) AND CPC:(G06F* OR G06Q* OR H04L*)	ALL	9131	2-Sep-18
L20	TAC:((fail* OR threat*) AND detect* AND (chang* OR updat*) AND (remed* OR eliminat* OR isolat* OR remov*) AND (replicat* OR duplicat* OR mirror* OR copy* OR copie* OR instantiat* OR instance*) AND request* AND resource* AND virtual* AND (roll_back* OR (roll* w1 back))) AND CPC:(G06F* OR G06Q* OR H04L*)	ALL	12	2-Sep-18
L19	TACD:((fail* OR threat*) AND detect* AND (chang* OR updat*) AND (remed* OR eliminat* OR isolat* OR remov*) AND (replicat* OR duplicat* OR mirror* OR copy* OR copie* OR instantiat* OR instance*) AND request* AND resource* AND virtual*) AND CPC:(G06F* OR G06Q* OR H04L*)	ALL	156125	2-Sep-18
L18	TAC:((fail* OR threat*) AND detect* AND (chang* OR updat*) AND (remed* OR eliminat* OR isolat* OR remov*) AND (replicat* OR duplicat* OR mirror* OR copy* OR copie* OR instantiat* OR instance*) AND request* AND resource* AND virtual*) AND CPC:(G06F* OR G06Q* OR H04L*)	ALL	123	2-Sep-18
L17	TACD:((fail* OR threat*) AND detect* AND (chang* OR updat*) AND (remed* OR eliminat* OR isolat* OR remov*) AND (replicat* OR duplicat* OR mirror* OR copy* OR copie* OR instantiat* OR instance*) AND request* AND resource*) AND CPC:(G06F* OR G06Q* OR H04L*)	ALL	252836	2-Sep-18
L16	TAC:((fail* OR threat*) AND detect* AND (chang* OR updat*) AND (remed* OR eliminat* OR isolat* OR remov*) AND (replicat* OR duplicat* OR mirror* OR copy* OR copie* OR instantiat* OR instance*) AND request* AND resource*) AND CPC:(G06F*	ALL	315	2-Sep-18

	OR G06Q* OR H04L*)			
L15	TACD:((fail* OR threat*) AND detect* AND (chang* OR updat*) AND (remed* OR eliminat* OR isolat* OR remov*) AND (replicat* OR duplicat* OR mirror* OR copy* OR copie* OR instantiat* OR instance*) AND request*) AND CPC:(G06F* OR G06Q* OR H04L*)	ALL	380608	2-Sep-18
L14	TAC:((fail* OR threat*) AND detect* AND (chang* OR updat*) AND (remed* OR eliminat* OR isolat* OR remov*) AND (replicat* OR duplicat* OR mirror* OR copy* OR copie* OR instantiat* OR instance*) AND request*) AND CPC:(G06F* OR G06Q* OR H04L*)	ALL	931	2-Sep-18
L13	TA:((fail* OR threat*) AND detect* AND (chang* OR updat*) AND (remed* OR eliminat* OR isolat* OR remov*) AND (replicat* OR duplicat* OR mirror* OR copy* OR copie* OR instantiat* OR instance*) AND request*) AND CPC:(G06F* OR G06Q* OR H04L*)	ALL	2	2-Sep-18
L12	TA:((fail* OR threat*) AND detect* AND (chang* OR updat*) AND (remed* OR eliminat* OR isolat* OR remov*) AND (replicat* OR duplicat* OR mirror* OR copy* OR copie* OR instantiat* OR instance*) AND virtual*) AND CPC:(G06F* OR G06Q* OR H04L*)	ALL	0	2-Sep-18
L11	TACD:((fail* OR threat*) AND detect* AND (chang* OR updat*) AND (remed* OR eliminat* OR isolat* OR remov*) AND (replicat* OR duplicat* OR mirror* OR copy* OR copie* OR instantiat* OR instance*)) AND CPC:(G06F* OR G06Q* OR H04L*)	ALL	488925	2-Sep-18
L10	TAC:((fail* OR threat*) AND detect* AND (chang* OR updat*) AND (remed* OR eliminat* OR isolat* OR remov*) AND (replicat* OR duplicat* OR mirror* OR copy* OR copie* OR instantiat* OR instance*)) AND CPC:(G06F* OR G06Q* OR H04L*)	ALL	1874	2-Sep-18
L9	TA:((fail* OR threat*) AND detect* AND (chang* OR updat*) AND (remed* OR eliminat* OR isolat* OR remov*) AND (replicat* OR duplicat* OR mirror* OR copy* OR copie* OR instantiat* OR instance*))	ALL	12	2-Sep-18

	AND CPC:(G06F* OR G06Q* OR H04L*)			
L8	TACD:((fail* OR threat*) AND detect* AND (chang* OR updat*)) AND CPC:(G06F9/455 OR G06F21/31 OR G06Q10/06 OR H04L43/50 OR H04L41/0823)	ALL	27856	2-Sep-18
L7	TAC:((fail* OR threat*) AND detect* AND (chang* OR updat*)) AND CPC:(G06F9/455 OR G06F21/31 OR G06Q10/06 OR H04L43/50 OR H04L41/0823)	ALL	1069	2-Sep-18
L6	TA:((fail* OR threat*) AND detect* AND (chang* OR updat*)) AND CPC:(G06F9/455 OR G06F21/31 OR G06Q10/06 OR H04L43/50 OR H04L41/0823)	ALL	57	2-Sep-18
L5	TACD:((fail* OR threat*) AND detect* AND (chang* OR updat*)) AND IC:(G06F9/45 OR G06F21/31 OR G06Q10/06)	ALL	22698	2-Sep-18
L4	TAC:((fail* OR threat*) AND detect* AND (chang* OR updat*)) AND IC:(G06F9/45 OR G06F21/31 OR G06Q10/06)	ALL	936	2-Sep-18
L3	TA:((fail* OR threat*) AND detect* AND (chang* OR updat*)) AND IC:(G06F9/45 OR G06F21/31 OR G06Q10/06)	ALL	53	2-Sep-18
L2	TACD:((fail* OR threat*) AND detect*) AND INV:((DIGIAMBATTISTA w1 Ernesto) OR (BEZDEDEANU w1 Andrei) OR (KAIL w1 Michael))	ALL	4	2-Sep-18
L1	TACD:(shelf* AND (item* OR product OR products)) AND AASN:(CYBRIC)	ALL	0	2-Sep-18

Non-Patent Literature (NPL) Search Strategy/Results:

IEEE/IEEEXplore (Search Date: 23 September 2018):

- (chang* OR updat*) AND (infrastructur* OR architectur*) AND (remed* OR eliminat* OR isolat* OR remov*) AND (replicat* OR duplicat* OR mirror* OR copy* OR copie* OR instantiat* OR instance*) AND (roll_back* OR (roll* w1 back))
- (chang* OR updat*) AND (infrastructur* OR architectur*) AND (remed* OR eliminat* OR isolat* OR remov*) AND (replicat* OR duplicat* OR mirror* OR copy* OR copie* OR instantiat* OR instance*) AND (roll_back* OR (roll* w1 back)) AND (fail* OR threat*)
- (chang* OR updat*) AND (infrastructur* OR architectur*) AND (remed* OR eliminat* OR isolat* OR remov*) AND (replicat* OR duplicat* OR mirror* OR copy* OR copie* OR instantiat* OR instance*) AND (roll_back* OR (roll* w1 back)) AND (fail* OR threat*) AND virtual*

Google/Google Scholar (Search Date: 22 September 2018):

- update infrastructure replication VM cloud security test detect threat remediate
- change infrastructure emulate VM security test detect threat remediate
- isolate architecture replication VM instance detect threat remediate rollback

IP.com (Search Date: 21 September 2018):

- (chang* OR updat*) AND (infrastructur* OR architectur*) AND (remed* OR eliminat* OR isolat* OR remov*) AND (replicat* OR duplicat* OR mirror* OR copy* OR copie* OR instantiat* OR instance*) AND (roll_back* OR (roll* w1 back))
- (chang* OR updat*) AND (infrastructur* OR architectur*) AND (remed* OR eliminat* OR isolat* OR remov*) AND (replicat* OR duplicat* OR mirror* OR copy* OR copie* OR instantiat* OR instance*) AND (roll_back* OR (roll* w1 back)) AND (fail* OR threat*)
- (chang* OR updat*) AND (infrastructur* OR architectur*) AND (remed* OR eliminat* OR isolat* OR remov*) AND (replicat* OR duplicat* OR mirror* OR

copy* OR copie* OR instantiat* OR instance*) AND (roll_back* OR (roll* w1
back)) AND (fail* OR threat*) AND virtual*