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UTILITY PATENT APPLICATION TRANSMITTAL (Only for new nonprovisional applications under 37 CFR 1.53(b))		Attorney Docket No.	WZIO P2438	
		First Named Inventor	Roy REZNIK	
		Title	SYSTEM AND METHOD FOR APPLYING A POLICY ON A NETWORK PATH	
		Priority Mail Express® Label No.		
APPLICATION ELEMENTS See MPEP chapter 600 concerning utility patent application contents.		Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450		
1. ☐ Fee Transmittal Form (PTO/SB/17 or equivalent) 2. ☐ Applicant asserts small entity status. See 37 CFR 1.27 3. ☐ Applicant certifies micro entity status. See 37 CFR 1.29. Applicant must attach form PTO/SB/15A or B or equivalent. 4. ☒ Specification [Total Pages <u>41</u>] Both the claims and abstract must start on a new page. (See MPEP § 608.01(a) for information on the preferred arrangement) 5. ☒ Drawing(s) (35 U.S.C. 113) [Total Sheets <u>10</u>] 6. Inventor's Oath or Declaration [Total Pages <u>3</u>] (including substitute statements under 37 CFR 1.64 and assignments serving as an oath or declaration under 37 CFR 1.63(e)) a. ☒ Newly executed (original or copy) b. ☐ A copy from a prior application (37 CFR 1.63(d)) 7. ☒ Application Data Sheet * See note below. See 37 CFR 1.76 (PTO/AIA/14 or equivalent) 8. CD-ROM or CD-R in duplicate, large table, or Computer Program (Appendix) ☐ Landscape Table on CD 9. Nucleotide and/or Amino Acid Sequence Submission (if applicable, items a. – c. are required) a. ☐ Computer Readable Form (CRF) b. ☐ Specification Sequence Listing on: i. ☐ CD-ROM or CD-R (2 copies); or ii. ☐ Paper c. ☐ Statements verifying identity of above copies ACCOMPANYING APPLICATION PAPERS 10. ☐ Assignment Papers (cover sheet & document(s)) Name of Assignee _____ 11. ☐ 37 CFR 3.73(c) Statement ☒ Power of Attorney (when there is an assignee) 12. ☐ English Translation Document (if applicable) 13. ☒ Information Disclosure Statement (PTO/SB/08 or PTO-1449) ☐ Copies of citations attached 14. ☐ Preliminary Amendment 15. ☐ Return Receipt Postcard (MPEP § 503) (Should be specifically itemized) 16. ☐ Certified Copy of Priority Document(s) (if foreign priority is claimed) 17. ☐ Nonpublication Request Under 35 U.S.C. 122(b)(2)(B)(i). Applicant must attach form PTO/SB/35 or equivalent. 18. ☒ Other: <u>Authorization for Internet Communication</u> <u>Authorization to Charge Deposit Account</u> <u>Track 1 Form</u> _____ _____		*Note: (1) Benefit claims under 37 CFR 1.78 and foreign priority claims under 1.55 must be included in an Application Data Sheet (ADS). (2) For applications filed under 35 U.S.C. 111, the application must contain an ADS specifying the applicant if the applicant is an assignee, person to whom the inventor is under an obligation to assign, or person who otherwise shows sufficient proprietary interest in the matter. See 37 CFR 1.46(b).		
		19. CORRESPONDENCE ADDRESS		
☒ The address associated with Customer Number: <u>122066</u> OR ☐ Correspondence address below				
Name _____				
Address _____				
City _____		State _____	Zip Code _____	
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Signature <u>/Michael Ben-Shimon/</u>		Date	<u>2023-07-24</u>	
Name (Print/Type) <u>Michael Ben-Shimon</u>		Registration No. (Attorney/Agent)	<u>69610</u>	

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IPR2025-01085

Orca Security EX1002 Page 1

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The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. The United States Patent and Trademark Office (USPTO) collects the information in this record under authority of 35 U.S.C. 2. The USPTO's system of records is used to manage all applicant and owner information including name, citizenship, residence, post office address, and other information with respect to inventors and their legal representatives pertaining to the applicant's/owner's activities in connection with the invention for which a patent is sought or has been granted. The applicable Privacy Act System of Records Notice for the information collected in this form is COMMERCE/PAT-TM-7 Patent Application Files, available in the Federal Register at 78 FR 19243 (March 29, 2013). <https://www.govinfo.gov/content/pkg/FR-2013-03-29/pdf/2013-07341.pdf>

Routine uses of the information in this record may include disclosure to: 1) law enforcement, in the event that the system of records indicates a violation or potential violation of law; 2) a Federal, state, local, or international agency, in response to its request; 3) a contractor of the USPTO having need for the information in order to perform a contract; 4) the Department of Justice for determination of whether the Freedom of Information Act (FOIA) requires disclosure of the record; 5) a Member of Congress submitting a request involving an individual to whom the record pertains, when the individual has requested the Member's assistance with respect to the subject matter of the record; 6) a court, magistrate, or administrative tribunal, in the course of presenting evidence, including disclosures to opposing counsel in the course of settlement negotiations; 7) the Administrator, General Services Administration (GSA), or their designee, during an inspection of records conducted by GSA under authority of 44 U.S.C. 2904 and 2906, in accordance with the GSA regulations and any other relevant (i.e., GSA or Commerce) directive, where such disclosure shall not be used to make determinations about individuals; 8) another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)); 9) the Office of Personnel Management (OPM) for personnel research purposes; and 9) the Office of Management and Budget (OMB) for legislative coordination and clearance.

If you do not furnish the information requested on this form, the USPTO may not be able to process and/or examine your submission, which may result in termination of proceedings, abandonment of the application, and/or expiration of the patent.

Additional Uses

Additional USPTO uses of the information in this record may include disclosure to: 1) the International Bureau of the World Intellectual Property Organization, if the record is related to an international application filed under the Patent Cooperation Treaty; 2) the public i) after publication of the application pursuant to 35 U.S.C. 122(b), ii) after issuance of a patent pursuant to 35 U.S.C. 151, iii) if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections, or an issued patent, or iv) without publication of the application or patent under the specific circumstances provided for by 37 CFR 1.14(a)(1)(v)-(vii); and/or 3) the National Archives and Records Administration, for inspection of records.

**CERTIFICATION AND REQUEST FOR PRIORITIZED EXAMINATION
UNDER 37 CFR 1.102(e) (Page 1 of 1)**

First Named Inventor:	Roy REZNIK	Nonprovisional Application Number (if known):	
Title of Invention:	SYSTEM AND METHOD FOR APPLYING A POLICY ON A NETWORK PATH		

APPLICANT HEREBY CERTIFIES THE FOLLOWING AND REQUESTS PRIORITIZED EXAMINATION FOR THE ABOVE-IDENTIFIED APPLICATION.

1. The processing fee set forth in 37 CFR 1.17(i)(1) and the prioritized examination fee set forth in 37 CFR 1.17(c) have been filed with the request. The publication fee requirement is met because that fee, set forth in 37 CFR 1.18(d), is currently \$0. The basic filing fee, search fee, and examination fee are filed with the request or have been already been paid. I understand that any required excess claims fees or application size fee must be paid for the application.
2. I understand that the application may not contain, or be amended to contain, more than four independent claims, more than thirty total claims, or any multiple dependent claims, and that any request for an extension of time will cause an outstanding Track I request to be dismissed.
3. The applicable box is checked below:

I. ☒ Original Application (Track One) - Prioritized Examination under § 1.102(e)(1)

- i. (a) The application is an original nonprovisional utility application filed under 35 U.S.C. 111(a). This certification and request is being filed with the utility application via EFS-Web.
---OR---
(b) The application is an original nonprovisional plant application filed under 35 U.S.C. 111(a). This certification and request is being filed with the plant application in paper.
- ii. An executed inventor's oath or declaration under 37 CFR 1.63 or 37 CFR 1.64 for each inventor, or the application data sheet meeting the conditions specified in 37 CFR 1.53(f)(3)(i) is filed with the application.

II. ☐ Request for Continued Examination - Prioritized Examination under § 1.102(e)(2)

- i. A request for continued examination has been filed with, or prior to, this form.
- ii. If the application is a utility application, this certification and request is being filed via EFS-Web.
- iii. The application is an original nonprovisional utility application filed under 35 U.S.C. 111(a), or is a national stage entry under 35 U.S.C. 371.
- iv. This certification and request is being filed prior to the mailing of a first Office action responsive to the request for continued examination.
- v. No prior request for continued examination has been granted prioritized examination status under 37 CFR 1.102(e)(2).

Signature /Michael Ben-Shimon/	Date 2023-07-24
Name (Print/Typed) Michael Ben-Shimon	Practitioner Registration Number 69610

Note: This form must be signed in accordance with 37 CFR 1.33. See 37 CFR 1.4(d) for signature requirements and certifications. Submit multiple forms if more than one signature is required.*

☐

*Total of _____ forms are submitted.

Privacy Act Statement

The **Privacy Act of 1974 (P.L. 93-579)** requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (*i.e.*, GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Doc Code: ECOMM.AUTH/ECOMM.WTDW

Doc Description: Internet Communications Authorized/Internet Communications Authorization Withdrawn

PTO/SB/439 (11-15)

AUTHORIZATION FOR INTERNET COMMUNICATIONS IN A PATENT APPLICATION OR REQUEST TO WITHDRAW AUTHORIZATION FOR INTERNET COMMUNICATIONS	Application No.	
	Filing Date	
	First Named Inventor	Matilda LIDGI
	Art Unit	
	Examiner Name	
	Practitioner Docket No.	WZIO P2438

To: Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

I. To authorize permission for Internet Communications.

☒ Recognizing that Internet communications are not secure, I hereby authorize the USPTO to communicate with the undersigned and practitioners in accordance with 37 CFR 1.33 and 37 CFR 1.34 concerning any subject matter of this application via video conferencing, instant messaging, or electronic mail. I understand that a copy of these communications will be made of record in the application file. (MPEP 502.03)

II. To withdraw authorization for Internet Communications.

☐ The authorization given on _____, to the USPTO to communicate with the undersigned and any practitioner in accordance with 37 CFR 1.33 and 37 CFR 1.34 concerning any subject matter of this application via Internet communications such as video conferencing, instant messaging, or electronic mail is hereby withdrawn. I understand that the withdrawal is effective when approved rather than when received.

I am the

☐ applicant.

☒ attorney or agent of record. Registration number 69,610.

☐ attorney or agent acting under 37 CFR 1.34. Registration number _____.

/Michael Ben-Shimon/
Signature

2023-07-24
Date

Michael Ben-Shimon
Typed or printed name

908-274-3111
Telephone Number

NOTE: This form must be signed in accordance with 37 CFR 1.33. See 37 CFR 1.4 for signature requirements and certifications. Juristic entities must be represented by a patent practitioner (see 37 CFR 1.31, which is applicable to any paper filed on or after September 16, 2012, that is presented on behalf of a juristic entity, regardless of application filing date). Submit multiple forms if more than one signature is required, see below*.

☐ * Total of _____ forms are submitted.

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The **Privacy Act of 1974 (P.L. 93-579)** requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (*i.e.*, GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number			
	Filing Date			
	First Named Inventor	Roy REZNIK		
	Art Unit			
	Examiner Name			
	Attorney Docket Number	WZIO P2438		

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**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**
(Not for submission under 37 CFR 1.99)

Application Number		
Filing Date		
First Named Inventor	Roy REZNIK	
Art Unit		
Examiner Name		
Attorney Docket Number	WZIO P2438	

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Examiner Signature		Date Considered	
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*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. ² Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). ³ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁴ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁵ Applicant is to place a check mark here if English language translation is attached.

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**
(Not for submission under 37 CFR 1.99)

Application Number	
Filing Date	
First Named Inventor	Roy REZNIK
Art Unit	
Examiner Name	
Attorney Docket Number	WZIO P2438

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

☐ That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

☐ See attached certification statement.

☐ The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☒ A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Michael Ben-Shimon/	Date (YYYY-MM-DD)	2023-07-24
Name/Print	Michael Ben-Shimon	Registration Number	69610

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. **DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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Application Data Sheet 37 CFR 1.76		Attorney Docket Number	WZIO P2438
		Application Number	
Title of Invention	SYSTEM AND METHOD FOR APPLYING A POLICY ON A NETWORK PATH		
The application data sheet is part of the provisional or nonprovisional application for which it is being submitted. The following form contains the bibliographic data arranged in a format specified by the United States Patent and Trademark Office as outlined in 37 CFR 1.76. This document may be completed electronically and submitted to the Office in electronic format using the Electronic Filing System (EFS) or the document may be printed and included in a paper filed application.			

Secrecy Order 37 CFR 5.2:

☐	Portions or all of the application associated with this Application Data Sheet may fall under a Secrecy Order pursuant to 37 CFR 5.2 (Paper filers only. Applications that fall under Secrecy Order may not be filed electronically.)
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Inventor Information:

Inventor 1					Remove
Legal Name					
Prefix	Given Name	Middle Name	Family Name	Suffix	
	Roy		REZNIK		
Residence Information (Select One) ☐ US Residency ☒ Non US Residency ☐ Active US Military Service					
City	Tel Aviv		Country of Residence ⁱ	IL	
Mailing Address of Inventor:					
Address 1		c/o Wiz, Inc.			
Address 2		One Manhattan West, 57th Floor			
City	New York		State/Province	NY	
Postal Code		10001	Country ⁱ	US	
Inventor 2					Remove
Legal Name					
Prefix	Given Name	Middle Name	Family Name	Suffix	
	Matilda		LIDGI		
Residence Information (Select One) ☐ US Residency ☒ Non US Residency ☐ Active US Military Service					
City	Tel Aviv		Country of Residence ⁱ	IL	
Mailing Address of Inventor:					
Address 1		c/o Wiz, Inc.			
Address 2		One Manhattan West, 57th Floor			
City	New York		State/Province	NY	
Postal Code		10001	Country ⁱ	US	
Inventor 3					Remove
Legal Name					

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	WZIO P2438
		Application Number	
Title of Invention	SYSTEM AND METHOD FOR APPLYING A POLICY ON A NETWORK PATH		

Prefix	Given Name	Middle Name	Family Name	Suffix
	Shai		KEREN	
Residence Information (Select One) ☐ US Residency ☒ Non US Residency ☐ Active US Military Service				
City	Tel Aviv	Country of Residence ⁱ	IL	

Mailing Address of Inventor:

Address 1	c/o Wiz, Inc.			
Address 2	One Manhattan West, 57th Floor			
City	New York	State/Province	NY	
Postal Code	10001	Country ⁱ	US	
Inventor 4				Remove

Legal Name				
Prefix	Given Name	Middle Name	Family Name	Suffix
	Eliran		MAROM	
Residence Information (Select One) ☐ US Residency ☒ Non US Residency ☐ Active US Military Service				
City	Yehud-Monoson	Country of Residence ⁱ	IL	

Mailing Address of Inventor:

Address 1	c/o Wiz, Inc.			
Address 2	One Manhattan West, 57th Floor			
City	New York	State/Province	NY	
Postal Code	10001	Country ⁱ	US	
All Inventors Must Be Listed - Additional Inventor Information blocks may be generated within this form by selecting the Add button. Add				

Correspondence Information:

Enter either Customer Number or complete the Correspondence Information section below. For further information see 37 CFR 1.33(a).			
☐ An Address is being provided for the correspondence Information of this application.			
Customer Number	122066		
Email Address	pair@mb-ip.com	Add Email	Remove Email

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	WZIO P2438
		Application Number	
Title of Invention	SYSTEM AND METHOD FOR APPLYING A POLICY ON A NETWORK PATH		

Application Information:

Title of the Invention	SYSTEM AND METHOD FOR APPLYING A POLICY ON A NETWORK PATH		
Attorney Docket Number	WZIO P2438	Small Entity Status Claimed	☐
Application Type	Nonprovisional		
Subject Matter	Utility		
Total Number of Drawing Sheets (if any)	10	Suggested Figure for Publication (if any)	

Filing By Reference:

Only complete this section when filing an application by reference under 35 U.S.C. 111(c) and 37 CFR 1.57(a). Do not complete this section if application papers including a specification and any drawings are being filed. Any domestic benefit or foreign priority information must be provided in the appropriate section(s) below (i.e., "Domestic Benefit/National Stage Information" and "Foreign Priority Information").

For the purposes of a filing date under 37 CFR 1.53(b), the description and any drawings of the present application are replaced by this reference to the previously filed application, subject to conditions and requirements of 37 CFR 1.57(a).

Application number of the previously filed application	Filing date (YYYY-MM-DD)	Intellectual Property Authority or Country

Publication Information:

☐ Request Early Publication (Fee required at time of Request 37 CFR 1.219)
☐ Request Not to Publish. I hereby request that the attached application not be published under 35 U.S.C. 122(b) and certify that the invention disclosed in the attached application has not and will not be the subject of an application filed in another country, or under a multilateral international agreement, that requires publication at eighteen months after filing.

Representative Information:

Representative information should be provided for all practitioners having a power of attorney in the application. Providing this information in the Application Data Sheet does not constitute a power of attorney in the application (see 37 CFR 1.32). Either enter Customer Number or complete the Representative Name section below. If both sections are completed the customer Number will be used for the Representative Information during processing.											
<table border="1"> <tr> <td>Please Select One:</td> <td>☒ Customer Number</td> <td>☐ US Patent Practitioner</td> <td>☐ Limited Recognition (37 CFR 11.9)</td> </tr> <tr> <td>Customer Number</td> <td colspan="3">122066</td> </tr> </table>				Please Select One:	☒ Customer Number	☐ US Patent Practitioner	☐ Limited Recognition (37 CFR 11.9)	Customer Number	122066		
Please Select One:	☒ Customer Number	☐ US Patent Practitioner	☐ Limited Recognition (37 CFR 11.9)								
Customer Number	122066										

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	WZIO P2438
		Application Number	
Title of Invention	SYSTEM AND METHOD FOR APPLYING A POLICY ON A NETWORK PATH		

Domestic Benefit/National Stage Information:

This section allows for the applicant to either claim benefit under 35 U.S.C. 119(e), 120, 121, 365(c), or 386(c) or indicate National Stage entry from a PCT application. Providing benefit claim information in the Application Data Sheet constitutes the specific reference required by 35 U.S.C. 119(e) or 120, and 37 CFR 1.78.

When referring to the current application, please leave the "Application Number" field blank.

Prior Application Status	Pending	Remove	
Application Number	Continuity Type	Prior Application Number	Filing or 371(c) Date (YYYY-MM-DD)
	Continuation in part of	17818898	2022-08-10
Prior Application Status	Pending	Remove	
Application Number	Continuity Type	Prior Application Number	Filing or 371(c) Date (YYYY-MM-DD)
	Continuation in part of	17659165	2022-04-13
Prior Application Status	Pending	Remove	
Application Number	Continuity Type	Prior Application Number	Filing or 371(c) Date (YYYY-MM-DD)
	Continuation in part of	17659163	2022-04-13
Prior Application Status	Pending	Remove	
Application Number	Continuity Type	Prior Application Number	Filing or 371(c) Date (YYYY-MM-DD)
	Continuation in part of	17659164	2022-04-13
Additional Domestic Benefit/National Stage Data may be generated within this form by selecting the Add button.			Add

Foreign Priority Information:

This section allows for the applicant to claim priority to a foreign application. Providing this information in the application data sheet constitutes the claim for priority as required by 35 U.S.C. 119(b) and 37 CFR 1.55. When priority is claimed to a foreign application that is eligible for retrieval under the priority document exchange program (PDX)ⁱ the information will be used by the Office to automatically attempt retrieval pursuant to 37 CFR 1.55(i)(1) and (2). Under the PDX program, applicant bears the ultimate responsibility for ensuring that a copy of the foreign application is received by the Office from the participating foreign intellectual property office, or a certified copy of the foreign priority application is filed, within the time period specified in 37 CFR 1.55(g)(1).

Application Number	Country ⁱ	Filing Date (YYYY-MM-DD)	Remove
			Access Code ⁱ (if applicable)
Additional Foreign Priority Data may be generated within this form by selecting the Add button.			Add

IPR2025-01085

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	WZIO P2438
	Application Number	
Title of Invention	SYSTEM AND METHOD FOR APPLYING A POLICY ON A NETWORK PATH	

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications

☐	This application (1) claims priority to or the benefit of an application filed before March 16, 2013 and (2) also contains, or contained at any time, a claim to a claimed invention that has an effective filing date on or after March 16, 2013. NOTE: By providing this statement under 37 CFR 1.55 or 1.78, this application, with a filing date on or after March 16, 2013, will be examined under the first inventor to file provisions of the AIA.
--------------------------	---

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	WZIO P2438
		Application Number	
Title of Invention	SYSTEM AND METHOD FOR APPLYING A POLICY ON A NETWORK PATH		

Authorization or Opt-Out of Authorization to Permit Access:

When this Application Data Sheet is properly signed and filed with the application, applicant has provided written authority to permit a participating foreign intellectual property (IP) office access to the instant application-as-filed (see paragraph A in subsection 1 below) and the European Patent Office (EPO) access to any search results from the instant application (see paragraph B in subsection 1 below).

Should applicant choose not to provide an authorization identified in subsection 1 below, applicant **must opt-out** of the authorization by checking the corresponding box A or B or both in subsection 2 below.

NOTE: This section of the Application Data Sheet is **ONLY** reviewed and processed with the **INITIAL** filing of an application. After the initial filing of an application, an Application Data Sheet cannot be used to provide or rescind authorization for access by a foreign IP office(s). Instead, Form PTO/SB/39 or PTO/SB/69 must be used as appropriate.

1. Authorization to Permit Access by a Foreign Intellectual Property Office(s)

A. Priority Document Exchange (PDX) - Unless box A in subsection 2 (opt-out of authorization) is checked, the undersigned hereby **grants the USPTO authority** to provide the European Patent Office (EPO), the Japan Patent Office (JPO), the Korean Intellectual Property Office (KIPO), the State Intellectual Property Office of the People's Republic of China (SIPO), the World Intellectual Property Organization (WIPO), and any other foreign intellectual property office participating with the USPTO in a bilateral or multilateral priority document exchange agreement in which a foreign application claiming priority to the instant patent application is filed, access to: (1) the instant patent application-as-filed and its related bibliographic data, (2) any foreign or domestic application to which priority or benefit is claimed by the instant application and its related bibliographic data, and (3) the date of filing of this Authorization. See 37 CFR 1.14(h)(1).

B. Search Results from U.S. Application to EPO - Unless box B in subsection 2 (opt-out of authorization) is checked, the undersigned hereby **grants the USPTO authority** to provide the EPO access to the bibliographic data and search results from the instant patent application when a European patent application claiming priority to the instant patent application is filed. See 37 CFR 1.14(h)(2).

The applicant is reminded that the EPO's Rule 141(1) EPC (European Patent Convention) requires applicants to submit a copy of search results from the instant application without delay in a European patent application that claims priority to the instant application.

2. Opt-Out of Authorizations to Permit Access by a Foreign Intellectual Property Office(s)

☐ A. Applicant **DOES NOT** authorize the USPTO to permit a participating foreign IP office access to the instant application-as-filed. If this box is checked, the USPTO will not be providing a participating foreign IP office with any documents and information identified in subsection 1A above.

☐ B. Applicant **DOES NOT** authorize the USPTO to transmit to the EPO any search results from the instant patent application. If this box is checked, the USPTO will not be providing the EPO with search results from the instant application.

NOTE: Once the application has published or is otherwise publicly available, the USPTO may provide access to the application in accordance with 37 CFR 1.14.

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	WZIO P2438
	Application Number	
Title of Invention	SYSTEM AND METHOD FOR APPLYING A POLICY ON A NETWORK PATH	

Applicant Information:

Providing assignment information in this section does not substitute for compliance with any requirement of part 3 of Title 37 of CFR to have an assignment recorded by the Office.

Applicant 1	Remove	
If the applicant is the inventor (or the remaining joint inventor or inventors under 37 CFR 1.45), this section should not be completed. The information to be provided in this section is the name and address of the legal representative who is the applicant under 37 CFR 1.43; or the name and address of the assignee, person to whom the inventor is under an obligation to assign the invention, or person who otherwise shows sufficient proprietary interest in the matter who is the applicant under 37 CFR 1.46. If the applicant is an applicant under 37 CFR 1.46 (assignee, person to whom the inventor is obligated to assign, or person who otherwise shows sufficient proprietary interest) together with one or more joint inventors, then the joint inventor or inventors who are also the applicant should be identified in this section.		
Clear		
☒ Assignee	☐ Legal Representative under 35 U.S.C. 117	☐ Joint Inventor
☐ Person to whom the inventor is obligated to assign.	☐ Person who shows sufficient proprietary interest	
If applicant is the legal representative, indicate the authority to file the patent application, the inventor is:		
Name of the Deceased or Legally Incapacitated Inventor:		
If the Applicant is an Organization check here. ☒		
Organization Name	Wiz, Inc.	
Mailing Address Information For Applicant:		
Address 1	One Manhattan West, 57th Floor	
Address 2		
City	New York	State/Province NY
Country	US	Postal Code 10001
Phone Number		Fax Number
Email Address		
Additional Applicant Data may be generated within this form by selecting the Add button. Add		

Assignee Information including Non-Applicant Assignee Information:

Providing assignment information in this section does not substitute for compliance with any requirement of part 3 of Title 37 of CFR to have an assignment recorded by the Office.

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	WZIO P2438
		Application Number	
Title of Invention	SYSTEM AND METHOD FOR APPLYING A POLICY ON A NETWORK PATH		

Assignee 1

Complete this section if assignee information, including non-applicant assignee information, is desired to be included on the patent application publication. An assignee-applicant identified in the "Applicant Information" section will appear on the patent application publication as an applicant. For an assignee-applicant, complete this section only if identification as an assignee is also desired on the patent application publication.

[Remove](#)

If the Assignee or Non-Applicant Assignee is an Organization check here.



Organization Name

Wiz, Inc.

Mailing Address Information For Assignee including Non-Applicant Assignee:

Address 1		One Manhattan West, 57th Floor	
Address 2			
City	New York	State/Province	NY
Country ⁱ	US	Postal Code	10001
Phone Number		Fax Number	
Email Address			

Additional Assignee or Non-Applicant Assignee Data may be generated within this form by selecting the Add button.

[Add](#)**Signature:**[Remove](#)

NOTE: This Application Data Sheet must be signed in accordance with 37 CFR 1.33(b). **However, if this Application Data Sheet is submitted with the INITIAL filing of the application and either box A or B is not checked in subsection 2 of the "Authorization or Opt-Out of Authorization to Permit Access" section, then this form must also be signed in accordance with 37 CFR 1.14(c).**

This Application Data Sheet **must** be signed by a patent practitioner if one or more of the applicants is a **juristic entity** (e.g., corporation or association). If the applicant is two or more joint inventors, this form must be signed by a patent practitioner, **all** joint inventors who are the applicant, or one or more joint inventor-applicants who have been given power of attorney (e.g., see USPTO Form PTO/AIA/81) on behalf of **all** joint inventor-applicants.

See 37 CFR 1.4(d) for the manner of making signatures and certifications.

Signature	/Michael Ben-Shimon/		Date (YYYY-MM-DD)	2023-07-24
First Name	Michael	Last Name	Ben-Shimon	Registration Number
				69610

Additional Signature may be generated within this form by selecting the Add button.

[Add](#)

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	WZIO P2438
		Application Number	
Title of Invention	SYSTEM AND METHOD FOR APPLYING A POLICY ON A NETWORK PATH		

This collection of information is required by 37 CFR 1.76. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 23 minutes to complete, including gathering, preparing, and submitting the completed application data sheet form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

- 1 The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these records.
- 2 A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
- 3 A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
- 4 A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
- 5 A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
- 6 A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
- 7 A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
- 8 A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.
- 9 A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

DECLARATION AND ASSIGNMENT FOR PATENT APPLICATIONS

As a below named inventor (designated as "the undersigned"), I hereby declare that:

This assignment is directed to: ☒ The attached application, or
☐ United States Application or PCT International Application
Number filed on

The application is entitled:

SYSTEM AND METHOD FOR APPLYING A POLICY ON A NETWORK PATH

The above-identified application was made or authorized to be made by me.

I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.

I have reviewed and understand the contents of the above-identified application.

I acknowledge the duty to disclose information which is material to patentability as defined in Title 37, Code of Federal Regulations § 1.56, including for continuation-in-part applications, material information which became available between the filing date of the prior application and the national or PCT international filing date of the continuation-in-part application.

POWER OF ATTORNEY: I hereby appoint all practitioners of **M&B IP ANALYSTS, LLC** who are listed under the USPTO Customer Number shown below as my practitioners to prosecute this application and to transact all business in the United States Patent and Trademark Office connected therewith.

Address all correspondence to **CUSTOMER NUMBER 122066**.

The undersigned hereby acknowledges that any willful false statement made in this declaration is punishable under 18 U.S.C. §1001 by fine or imprisonment of not more than five (5) years, or both.

ASSIGNMENT

WHEREAS, **Wiz, Inc.** having an address at **One Manhattan West, 57th Floor, New York, NY, United States 10001** (hereinafter "ASSIGNEE"), is desirous of acquiring the entire right, title and interest in, to and under the above-identified application and invention, and to any Letters Patent(s) that may be granted therefor.

NOW, THEREFORE, for good and valuable consideration, the receipt of which is hereby acknowledged, the undersigned has sold, assigned, transferred and set over, and by these presents does hereby sell, assign, transfer and set over, unto the said ASSIGNEE, its successors, legal representatives and assigns, the entire right, title and interest in, to and under the said invention, and the said United States application and all divisions, renewals and continuations thereof, and all Patents of the United States which may be granted thereon and all reissues and extensions thereof; and all applications for industrial property protection, including, without limitation, all applications for patents, utility models, and designs which may hereafter be filed for said invention in any country or countries foreign to the United States, together with the right to file such applications and the right to claim for the same the priority rights derived from said United States application under the Patent Laws of the United States, the International Convention for the Protection of Industrial Property, or any other international agreement or the domestic laws of the country in which any such application is filed, as may be applicable; and all forms of industrial property protection, including, without limitation, patents, utility models, inventor's certificates and designs

DECLARATION AND ASSIGNMENT FOR PATENT APPLICATIONS

which may be granted for said invention in any country or countries foreign to the United States and all extensions, renewals and reissues thereof;

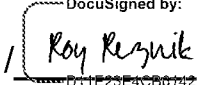
The undersigned authorizes and requests the Commissioner of Patents and Trademarks of the United States, and any Official of any country or countries foreign to the United States, whose duty it is to issue patents or other evidence or forms of industrial property protection on applications as aforesaid, to issue the same to the said ASSIGNEE, its successors, legal representatives and assigns, in accordance with the terms of this instrument.

The undersigned covenants and agrees that he has full right to convey the entire interest herein assigned, and has not executed, and will not execute, any agreement in conflict herewith.

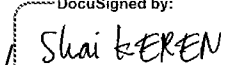
The undersigned further covenants and agrees that he will communicate to the said ASSIGNEE, its successors, legal representatives and assigns, any facts known respecting said invention, and testify in any legal proceeding, sign all lawful papers, execute all divisional, continuing, reissue and foreign applications, make all rightful oaths, and generally do everything possible to aid the said ASSIGNEE, its successors, legal representatives and assigns, to obtain and enforce proper protection for said invention in all countries.

The undersigned hereby grants the practitioners of **M&B IP Analysts, LLC** the power to insert any further identification which may be necessary or desirable in order to comply with the rules of the U.S. Patent and Trademark Office.

In witness whereof, executed by the undersigned on the date below the undersigned name.

Inventor's Printed Name in English:	Roy REZNIK
Inventor's Residence:	Tel Aviv, Israel
Inventor's Signature:	DocuSigned by:  B11E23E4C86142D...
Date:	7/20/2023

Inventor's Printed Name in English:	Matilda LIDGI
Inventor's Residence:	Tel Aviv, Israel
Inventor's Signature:	DocuSigned by:  2161CEAD76A1437...
Date:	7/16/2023

Inventor's Printed Name in English:	Shai KEREN
Inventor's Residence:	Tel Aviv, Israel
Inventor's Signature:	DocuSigned by:  6D65EAB1BA267AD...
Date:	7/13/2023

DECLARATION AND ASSIGNMENT FOR PATENT APPLICATIONS

Inventor's Printed Name in English:	Eliran MAROM
Inventor's Residence:	Yehud-Monoson, Israel
Inventor's Signature:	DocuSigned by:  7E2104795585B4B1...
Date:	7/14/2023

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

First Named Inventor: **Matilda LIDGI**
Application No.: **TBD**
Filed: **24 July 2023**
Customer No.: **122066**

Attorney Docket No.: **WZIO P2438**
Group Art Unit: **TBD**
Confirmation Number: **TBD**
Examiner: **TBD**

Title: POLICIES ON NETWORK PATH

Commissioner for Patents
P.O. Box 1450
Alexandria VA 22313-1450

Authorization to Charge Deposit Account

Commissioner:

In accordance with the Non-Provisional Application submitted herewith, the Director is hereby authorized to charge any required fee except for excess claims fees required under 37 CFR 1.492(d) and (e) and multiple dependent claim fee required under 37 CFR 1.492(f), or credit any overpayment to, deposit account **50-6438**.

Respectfully submitted,

By: /Michael Ben-Shimon/
Michael Ben-Shimon
Reg. No. 69,610

Date: July 24, 2023

SYSTEM AND METHOD FOR APPLYING A POLICY ON A NETWORK PATH

CROSS-REFERENCE TO RELATED APPLICATIONS

[0001] This application is a continuation-in-part of U.S. Non-Provisional Patent Application No. 17/659,165 filed on April 13, 2022. This application is also a continuation-in-part of U.S. Non-Provisional Patent Application No. 17/659,163 filed on April 13, 2022. This application is further a continuation-in-part of U.S. Non-Provisional Patent Application No. 17/659,164, filed April 13, 2022, and a continuation-in-part of U.S. Non-Provisional Patent Application No. 17/818,898 filed August 10, 2022. The contents of all the above referenced applications are hereby incorporated by reference.

TECHNICAL FIELD

[0002] The present disclosure relates generally to exposure detection in cloud environments, and specifically to active detection of exposure in cloud environments.

BACKGROUND

[0003] External attack surface management (EASM) is a term which for a technology field and best practices which are utilized in cybersecurity to describe what vulnerabilities an organization has within their network infrastructure, which may include cloud computing environments, local network environments, and the like. For example, an organization may have a virtual private cloud (VPC) implemented in Amazon® Web Services (AWS), Microsoft® Azure, Google® Cloud Platform (GCP), and the like, which serves as a cloud computing environment. The cloud computing environment may include a plurality of workloads, such as virtual machines, container engines, serverless functions, and the like, any of which may pose a security risk, for example by having a vulnerability, allowing an attacker to infiltrate the organization's network in an unintended manner.

[0004] EASM technologies aim to discover where an organization is vulnerable, in order for a network administrator to secure the discovered vulnerabilities. For example, discovering an out-of-date operating system (OS) having a known vulnerability running on a virtual machine may require the network administrator to update the OS version, or apply a

software patch, in order to address the vulnerability. This is also known as minimizing the external attack surface.

[0005] One such technology which may be deployed in order to discover the external attack surface is known as active scanning. Active scanning attempts to infiltrate a network (e.g., access resources in the above mentioned VPC). For example, by sending packets to endpoints in the network. Thus, an active scanner may attempt to access random domains, at random ports, in order to gain access to a network or to a network resource.

[0006] This method has some serious drawbacks. For example, attempting to guess random domains, random ports, and the like, creates a large volume of network traffic which the target (i.e., organization's network) must deal with. This may congest the network, and further risks malfunctions, such as a denial of service to other clients, data corruption from incompatible queries, and the like. It is often of upmost importance to an organization to keep a production environment in a fully operational state. Therefore, using an active scanner to test accessibility of an active production environment may be detrimental to this objective, since it would require devotion of substantial resources at least in terms of network bandwidth to perform such tests.

[0007] A cloud computing environment may limit the number of open ports the network provides, however in practice that limitation is often limited, opting instead to limit port access at the resource level. Thus, in order to discover if a resource includes an open port, a port scan may be utilized. A port scan involves determining what ports in a network, or network element (such as the resource), are open. An open port receives information. Port numbers range from 0 to 65535, thus performing a full scan for each port, to determine if the port of a particular resource is open, is computationally intensive.

[0008] It would therefore be advantageous to provide a solution that would overcome at least the challenges noted above.

SUMMARY

[0009] A summary of several example embodiments of the disclosure follows. This summary is provided for the convenience of the reader to provide a basic understanding of such embodiments and does not wholly define the breadth of the disclosure. This summary is not an extensive overview of all contemplated embodiments, and is intended to neither

identify key or critical elements of all embodiments nor to delineate the scope of any or all aspects. Its sole purpose is to present some concepts of one or more embodiments in a simplified form as a prelude to the more detailed description that is presented later. For convenience, the term “some embodiments” or “certain embodiments” may be used herein to refer to a single embodiment or multiple embodiments of the disclosure.

[0010] A system of one or more computers can be configured to perform particular operations or actions by virtue of having software, firmware, hardware, or a combination of them installed on the system that in operation causes or cause the system to perform the actions. One or more computer programs can be configured to perform particular operations or actions by virtue of including instructions that, when executed by data processing apparatus, cause the apparatus to perform the actions.

[0011] In one general aspect, method may include selecting a reachable resource having a network path to access the reachable resource, where the reachable resource is a cloud object deployed in a cloud computing environment, having access to an external network which is external to the cloud computing environment. Method may also include actively inspecting the network path to determine if the network path of the reachable resource is accessible from the external network. Method may furthermore include applying a policy on the accessible network path, where the policy includes a conditional rule. Method may in addition include initiating a mitigation action, in response to determining that the conditional rule is not met. Method may moreover include applying the policy on another network path, in response to determining that the conditional rule is met. Other embodiments of this aspect include corresponding computer systems, apparatus, and computer programs recorded on one or more computer storage devices, each configured to perform the actions of the methods.

[0012] Implementations may include one or more of the following features. Method may include: initiating active inspection for each network path of a plurality of network paths; storing an indicator to indicate that a first network path of the plurality of network paths is a valid path, in response to determining that the reachable resource is accessible from the external network; and applying the policy on the first network path. Method may include: initiating active inspection by generating an access instruction for the reachable resource; and executing the access instruction on a network path. Method may include:

applying the policy only on each network path of the plurality of network paths which is a valid path. Method may include: initiating active inspection on each network path of the plurality of network paths to determine if the network path is a valid network path. Method may include: initiating the mitigation action on the reachable resource. Method where the mitigation action includes any one of: revoking access to the reachable resource, revoking access from the reachable resource, closing a port of the reachable resource, generating a notification, generating an alert, and any combination thereof. Method may include: generating an exception to the policy based on a valid network path. Method may include: initiating active inspection of the network path to detect an application path. Method may include: generating the mitigation action further based on the application path. Implementations of the described techniques may include hardware, a method or process, or a computer tangible medium.

[0013] In one general aspect, non - transitory computer - readable medium may include one or more instructions that, when executed by one or more processors of a device, cause the device to: select a reachable resource having a network path to access the reachable resource, where the reachable resource is a cloud object deployed in a cloud computing environment, having access to an external network which is external to the cloud computing environment. Medium may furthermore include one or more instructions that, when executed by one or more processors of a device, cause the device to: actively inspect the network path to determine if the network path of the reachable resource is accessible from the external network. Medium may in addition include one or more instructions that, when executed by one or more processors of a device, cause the device to: apply a policy on the accessible network path, where the policy includes a conditional rule. Medium may moreover include initiating a mitigation action, in response to determining that the conditional rule is not met. Medium may also include one or more instructions that, when executed by one or more processors of a device, cause the device to: apply the policy on another network path, in response to determining that the conditional rule is met. Other embodiments of this aspect include corresponding computer systems, apparatus, and computer programs recorded on one or more computer storage devices, each configured to perform the actions of the methods.

[0014] In one general aspect, system may include a processing circuitry. System may also include a memory, the memory containing instructions that, when executed by the processing circuitry, configure the system to: select a reachable resource having a network path to access the reachable resource, where the reachable resource is a cloud object deployed in a cloud computing environment, having access to an external network which is external to the cloud computing environment. System may in addition include instructions that, when executed by the processing circuitry, configure the system to: actively inspect the network path to determine if the network path of the reachable resource is accessible from the external network. System may moreover include instructions that, when executed by the processing circuitry, configure the system to: apply a policy on the accessible network path, where the policy includes a conditional rule. System may also include instructions that, when executed by the processing circuitry, configure the system to: initiate a mitigation action, in response to determining that the conditional rule is not met. System may furthermore include instructions that, when executed by the processing circuitry, configure the system to: apply the policy on another network path, in response to determining that the conditional rule is met. Other embodiments of this aspect include corresponding computer systems, apparatus, and computer programs recorded on one or more computer storage devices, each configured to perform the actions of the methods.

[0015] Implementations may include one or more of the following features. System where the memory contains further instructions which when executed by the processing circuitry further configure the system to: initiate active inspection for each network path of a plurality of network paths; store an indicator to indicate that a first network path of the plurality of network paths is a valid path, in response to determining that the reachable resource is accessible from the external network; and apply the policy on the first network path. System where the memory contains further instructions which when executed by the processing circuitry further configure the system to: initiate active inspection by generating an access instruction for the reachable resource; and execute the access instruction on a network path. System where the memory contains further instructions which when executed by the processing circuitry further configure the system to: apply the policy only on each network path of the plurality of network paths which is a valid path.

System where the memory contains further instructions which when executed by the processing circuitry further configure the system to: initiate active inspection on each network path of the plurality of network paths to determine if the network path is a valid network path. System where the memory contains further instructions which when executed by the processing circuitry further configure the system to: initiate the mitigation action on the reachable resource. System where the mitigation action includes any one of: revoking access to the reachable resource, revoking access from the reachable resource, closing a port of the reachable resource, generating a notification, generating an alert, and any combination thereof. System where the memory contains further instructions which when executed by the processing circuitry further configure the system to: generate an exception to the policy based on a valid network path. System where the memory contains further instructions which when executed by the processing circuitry further configure the system to: initiate active inspection of the network path to detect an application path. System where the memory contains further instructions which when executed by the processing circuitry further configure the system to: generate the mitigation action further based on the application path. Implementations of the described techniques may include hardware, a method or process, or a computer tangible medium.

BRIEF DESCRIPTION OF THE DRAWINGS

[0016] The subject matter disclosed herein is particularly pointed out and distinctly claimed in the claims at the conclusion of the specification. The foregoing and other objects, features, and advantages of the disclosed embodiments will be apparent from the following detailed description taken in conjunction with the accompanying drawings.

[0017] Figure 1 is a diagram of a cloud computing environment monitored by an active inspector, implemented in accordance with an embodiment.

[0018] Figure 2 is a security graph illustrating a network path, implemented in accordance with an embodiment.

[0019] Figure 3 is a flowchart of a method for performing active inspection of a cloud computing environment, implemented in accordance with an embodiment.

[0020] Figure 4A is a flowchart depicting a method for determining reachable properties of security objects, according to an embodiment.

[0021] Figure 4B is a flowchart depicting the analysis of a network path to determine reachable properties of objects included in the path, according to an embodiment.

[0022] Figure 5 is a screenshot generated by an active inspector, implemented in accordance with an embodiment.

[0023] Figure 6 is a schematic diagram of an active inspector according to an embodiment.

[0024] Figure 7 is a flowchart of a method for detecting a technology stack utilizing active inspection, implemented in accordance with an embodiment.

[0025] Figure 8 is a flowchart of a method for detecting application paths, according to an embodiment.

[0026] Figure 9 is a flowchart of a method for applying a policy on a network path, implemented in accordance with an embodiment.

DETAILED DESCRIPTION

[0027] It is important to note that the embodiments disclosed herein are only examples of the many advantageous uses of the innovative teachings herein. In general, statements made in the specification of the present application do not necessarily limit any of the various claimed embodiments. Moreover, some statements may apply to some inventive features but not to others. In general, unless otherwise indicated, singular elements may be in plural and vice versa with no loss of generality. In the drawings, like numerals refer to like parts through several views.

[0028] The various disclosed embodiments include a system and a method for applying a policy on a network path. According to an embodiment,

[0029] Active inspection allows to generate instructions directed at the reachable resource over a network path, which when received by the reachable resource cause the reachable resource to send a response. For example, a reachable resource may have indicated that port 22 is an open port. Port 22 is typically associated with secure shell (SSH) protocol. In certain embodiments, a port may be associated with a plurality of applications, each application associated with an access instruction. An SSH session may be initiated with the reachable resource having an IP address at 10.0.0.256 on port 22, by providing an access instruction including "ssh user@10.0.0.256:22".

[0030] Discovering an application using the methods described herein allows to validate a tech stack as part of an external attack surface management (EASM) procedure in an efficient way, since only ports which are indicated, for example by static analysis, as being open are inspected to determine if access may occur. In an embodiment, only predetermined applications are checked for each open port, which further reduces the number of access instructions required to probe open ports, as the alternative is to test each probe for each application, which can easily result in hundreds of thousands of access instructions required to determine what applications are deployed on just a single resource.

[0031] Various techniques of static analysis can be used in order to determine reachability properties of a resource deployed in a cloud computing environment. Reachability properties, or parameters, may be utilized to establish a network path to the resource from an external network through the cloud computing environment. An access instruction may be generated based on the network path to determine if a network path generated through static analysis is indeed a viable path to reach the resource. Determining what network paths are viable is advantageous as it exposes what network paths can be used to access the cloud computing environment from external networks, and therefore what parts of the cloud computing environment are in practice opened to attack. These network paths should be addressed by system administrators as early as possible to minimize the effect of a cyber-attack.

[0032] Another aspect of the disclosed embodiments allows discovering a technology stack on a resource deployed in a cloud computing environment. In an embodiment a technology stack (or “tech stack”) includes a collection of software files, such as an application, an operating system, a driver, a file system, and the like which are installed or deployed on a resource, such as a virtual machine, which in turn is deployed in a cloud computing environment. For example, Nginx® deployed on a virtual machine having a Linux® operating system has a technology stack (also referred to as a tech stack) which includes Nginx and Linux. In an embodiment a reachable resource is selected. A network protocol is detected for the reachable resource. In some embodiments, a security graph representing the cloud computing environment is traversed to determine what network protocol is available on the reachable resource. A network protocol may be, for example,

a TCP protocol, UDP protocol, and the like. The network protocol may include an open port, on which an application of the reachable resource is listening. An open port does not necessarily indicate though what application is listening on that port.

[0033] Fig. 1 is an example diagram 100 of a cloud computing environment monitored by an active inspector, implemented in accordance with an embodiment. A first cloud environment 110 includes a plurality of principals and resources. A resource is a cloud entity which supplies functionality, such as processing power, memory, storage, communication, and the like. A resource may supply more than one functionality. Resources may include, for example, virtual machines (VMs) such as VMs 113, container engines such as container engines 115, serverless functions such as serverless functions 117, and the like. A VM may be implemented using Oracle® VirtualBox. A container engine may be implemented using Kubernetes® or Docker®. A serverless function may be implemented using Lambda®.

[0034] A principal is a cloud entity which acts on a resource, meaning it can request, or otherwise initiate, actions or operations in the cloud environment which cause a resource to perform a function. A principal may be, for example, a user account such as user account 112, a service account such as service account 114, a role, and the like. In an embodiment a user account 112 is implemented as a data structure which includes information about an entity, such as username, a password hash, an associated role, and the like.

[0035] The first cloud environment 110 may be implemented utilizing a cloud infrastructure, such as Amazon® Web Services (AWS), Microsoft® Azure, Google® Cloud Platform (GCP), and the like. In an embodiment, the first cloud environment 110 may be implemented as a virtual private cloud (VPC) on such a cloud infrastructure. The first cloud environment 110 may be, for example, a production environment for an organization. A production environment is a computing environment which provides services, for example, to client devices within the production environment and outside of it. An organization may also have a staging environment, which is a computing environment substantially identical to the production environment in at least some deployments of resource (e.g., workloads) which is used for the purpose of testing new

policies, new permissions, new applications, new appliances, new resources, and the like, which are not present in the production environment.

[0036] It is often of upmost importance to an organization to keep the production environment in a fully operational state. Therefore, using an active scanner to test accessibility to the first cloud environment 110 may be detrimental to this objective, since it would require devotion of substantial resources at least in terms of network bandwidth to perform such tests.

[0037] An inspection environment 120 is communicatively connected with the first cloud environment 110, and a public network 130. The public network 130 is also communicatively connected with the first cloud environment 110. In an embodiment, the public network 120 may be, but is not limited to, a wireless, cellular or wired network, a local area network (LAN), a wide area network (WAN), a metro area network (MAN), the Internet, the worldwide web (WWW), similar networks, and any combination thereof.

[0038] The inspection environment 120 may be implemented as a VPC in a cloud infrastructure. In an embodiment, the cloud infrastructure of the inspection environment 120 may be the same cloud infrastructure as the first cloud environment 110. In some embodiments, the inspection environment may be implemented as multiple cloud environments, each utilizing a cloud infrastructure. The inspection environment includes a security graph database (DB) 122 for storing a security graph, and at least an active inspector 125.

[0039] In an embodiment, the security graph stored in the security graph DB 122 represents at least the first cloud environment 110 using a predefined data schema. For example, each resource and each principal of the first cloud environment 110 may be represented as a corresponding resource node or principal node in the security graph. The various nodes in the security graph may be connected, for example, based on policies, roles, permissions, and the like, which are detected in the first cloud environment 110. A predefined data schema may include data structures including into which values can be inputted to represent a specific cloud entity. For example, a resource may be represented by a template data structure which includes data attributes, whose values uniquely identify the resource, such as address, name, type, OS version, and the like.

[0040] The active inspector 125 is configured to receive a network path to access a resource in the first cloud environment 110. In an embodiment, a network path may be stored as a data string which includes one or more reachability parameters. Such parameters include host names, protocols, IP addresses, ports, usernames, passwords, and the like. In certain embodiments, the active inspector 125 is further configured to receive a list of network paths. The network paths may be received periodically. In certain embodiments, the active inspector 125 is also configured to generate an instruction which includes a query for the security graph, such instruction or instructions when executed by the security graph database 122 cause(s) generation of an output including one or more network paths. For example, network paths may be generated every 24 hours, while active inspection may occur once per day, once per week, once per month, and so on.

[0041] An example of a static analysis process for generating network paths, also known as determining reachability to a resource, is discussed in more detail in U.S. Patent No. 11,374,982, the contents of which are hereby incorporated by reference herein. In an embodiment, the active inspector 125 may generate an instruction based on the network path to access the resource associated with the network path. For example, the instruction may be to send a data packet to an IP address of the resource, and receive an acknowledgement (ACK) response. The active inspector 125 may generate a log which includes, for example, the network path, the instruction sent by the active inspector 125, and any response(s) received from the resource. For example, if the active inspector 125 sends an HTTP (hypertext transfer protocol) request, a response may be a 404 error, a 403 error, 500 error, 502 error, and the like.

[0042] In an embodiment the active inspector 125 initiates active inspection of a network path to determine if a resource is accessible via the network path from a network which is external to the first cloud environment 110.

[0043] In some embodiments, the first cloud environment 110 further includes a policy engine 116. In certain embodiments, the policy engine 116 is implemented in the inspection environment 120. In an embodiment, the policy engine 116 includes a plurality of policies. In some embodiments, a policy includes a statement, a conditional rule, a combination thereof, and the like. In an embodiment, the policy engine 116 is configured to apply a policy on a network path, an application path, a combination thereof, and the like. In some

embodiments, the active inspector 125 is configured to access a policy stored on the policy engine 116 and apply the policy on a network path, a valid network path, and the like.

[0044] Fig. 2 is an example of a security graph 200 illustrating a network path, implemented in accordance with an embodiment. The security graph 200 includes a plurality of nodes, each node connected to at least another node by an edge. In certain embodiments, a pair of nodes may be connected by a plurality of edges. In some embodiments, each edge may indicate a type of connection between the nodes. For example, an edge may indicate a "can access," to indicate that a cloud entity represented by a first node can access the cloud entity represented by a second node.

[0045] A first enrichment node 210 (also referred to as public network node 210) represents a public network, such as public network 130 of Fig. 1 above. An enrichment node, such as enrichment node 210, is a node generated based off of insights determined from data collected from a computing environment, such as the first cloud computing environment 110 of Fig. 1 above. An enrichment node may also represent, for example, a vulnerability. By connecting resource nodes in the graph to the enrichment node representing a vulnerability, the security graph 200 may indicate that the resources contain the vulnerability. This allows a compact representation as the security graph does not redundantly store multiple data fields of the same vulnerability in each resource node.

[0046] The public network node 210 is connected to a first resource node 220 (also referred to as firewall node 220) representing a firewall workload. The firewall represented by the firewall node 220 may be implemented, for example, as a virtual machine in the first cloud computing environment. Connecting the public network node 210 to the firewall node 220 represents that the firewall is open to transceiving communication between itself and the public network.

[0047] The firewall node 220 is further connected to a second resource node 230 (also referred to as API gateway node 230) which represents an API (application programming interface) gateway. An API gateway is a workload, for example a serverless function, which can act as a reverse proxy between a client and resources, accepting API calls, directing them to the appropriate service, workload, resource, etc. and returning a result to the client when appropriate.

[0048] The API gateway node 230 is connected to a first principal node 240 (also referred to as VM node 240) representing a virtual machine hosting an application and a database, and is also connected to a second principal node 250 (also referred to as container engine node 250) which hosts a plurality of container nodes. The VM node 240 is connected to an application node 242, and a database node 244. The application node 242 may indicate, for example, that a certain application, having a version number, binaries, files, libraries, and the like, is executed on the VM which is represented by the VM node 240.

[0049] In an embodiment, the VM node 240 may be connected to a plurality of application nodes. The database node 244 represents a database which is stored on the VM (represented by VM node 240) or stored on a storage accessible by the VM. The database node 244 may include attributes which define a database, such as type (graph, columnar, distributed, etc.), version number, query language, access policy, and the like.

[0050] Fig. 3 is an example flowchart 300A of a method for performing active inspection of a cloud computing environment, implemented in accordance with an embodiment.

[0051] At S310, at least one network path for a first resource in a cloud computing environment is received. The network path, also known as object reachability, includes data (e.g. reachability parameters) for accessing the first resource from a public network, which is not the cloud computing environment of the first resource, such as the Internet. In an embodiment, an active inspector may receive the at least a network path, for example from a security graph. In an embodiment, S320 includes generating an instruction (or instructions) which when executed by a database system storing the security graph return a result of one or more resources, and a respective network path for each of the one or more resources. In certain embodiments, the network paths may be received periodically.

[0052] In some embodiments, the first resource may be one of a plurality of first resources, which are each substantially identical. For example, a group of virtual machines which are generated based on the same code or image are substantially identical, since their initial deployment would be identical other than a unique identifier assigned to each machine. In such embodiments it may be beneficial to inspect the at least one network path for a subset of the plurality of first resources, in order to decrease the computation and network resources required. This may be acceptable in such embodiments, as the

expectation is that the plurality of VMs would be accessible in similar network paths. In some embodiments, the subset includes one or more first resources.

[0053] In an embodiment, each of the received network paths includes a set of reachability parameters to reach a specific cloud object in the cloud environment. The reachability parameters, and hence the network paths are generated by statically analyzing the cloud environment. An example method for such static analysis is described with reference to Figs. 4A and 4B below.

[0054] At S320, an access instruction is generated to access the first resource based on the network path. In an embodiment, the access instruction is generated by the active inspector deployed outside of the cloud environment where the first resource resides. In certain embodiments, the instruction includes one or more access parameters. Such parameters may include, but are not limited to, a host name, an IP address, a communication protocol, a port, a username, a password, and the like, or combination thereof. A communication protocol may be, for example, HTTP or UDP (user datagram protocol). For example, the instruction may be a ping, GET, CONNECT, or TRACE request over HTTP.

[0055] In certain embodiments, a plurality of access instructions may be generated. For example, a plurality of generated access instructions may include a first access instruction having a first request, and a second access instruction having a second request which is different from the first request. For example, the first access instruction may include a CONNECT request, and the second access instruction may include a GET request. In certain embodiments, a plurality of first access instructions may be generated. In such embodiments, each first access instruction may include a same type of request (e.g., CONNECT) with different values (e.g., different web address, different port, and so on). For example, a resource may be reachable at IP address 10.0.0.127, at ports 800 through 805. The IP address and ports would be reachability parameters, based on which an active inspector can generate a plurality of first access instructions based on an HTTP GET request, such as:

```
GET /bin HTTP/1.1
Host:10.0.0.127:800
```

and further generate another HTTP GET request:

```
GET /bin HTTP/1.1  
Host:10.0.0.127:801
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and so on, which when executed attempt to access a /bin folder in the resource which has an IP address of 10.0.0.127. In certain embodiments, the active inspector (e.g., the active inspector 125 of Fig. 1) may connect to a proxy server (not shown) through the public network 130, and send a first access instruction to a resource in the cloud environment 110 through a first proxy server, and send a second access instruction (which may or may not be identical to the first access instruction) through a second proxy server. In such embodiments, each proxy server may show as originating from a different country of origin, therefore the source would receive access requests from seemingly different sources. This is advantageous to determine, for example, if a resource is configured to block certain network traffic based on geographic location.

[0056]At S330, execution of the generated access instruction is caused. The access instruction, when executed, causes an attempt to actually access the resource. In an embodiment, the attempt may result in network traffic being generated, including requests sent to the resource and answers (i.e., data packets) received. While static analysis provides a possible path to access a resource, executing the access instruction provides a real result of an attempt to utilize the possible path, in order to determine which paths are really viable, and which are not. For example, a path may be possible based on static analysis, but not viable, where, for example, an application deployed on the resource prevents such an access from occurring. In an embodiment a network path is determined to be viable (or accessible), if the access instruction, when executed does not return an error message. An error message may be, for example, a timeout (e.g., in response to a “ping” request), a 403 Forbidden (e.g., in response to an HTTP GET request), and the like. In some embodiments, the access instruction may be executed by the active inspector 125.

[0057] At S340, a determination is performed to determine if the network path is accessible, based on the execution of the generated access instruction. Performing an active inspection of a cloud environment allows to determine which of the reachability paths (i.e., network paths) are indeed vulnerable, meaning that paths that can be used to gain access into the cloud environment, and which reachability paths (network paths) are not vulnerabilities since the active inspector could not gain access to the resource, therefore the reachability path is not possible in practice. Reachability paths which have been confirmed through both static analysis (i.e., analysis using the security graph) and active inspection are paths which should therefore be considered more vulnerable. In an embodiment, if the network path results in successfully reaching the resource, the network path is determined to be accessible (or viable). If the resource is not reachable by the network path, the network path is determined to be inaccessible (or unviable).

[0058] At S350, a security graph is updated based on the network path determination. In certain embodiments, the active inspector may update the security graph, which includes a representation of the cloud environment in which the first resource is deployed, to indicate whether a reachability path is confirmed (i.e., is viable) by active inspection or not, where a confirmed path is a path through which the active inspector successfully accessed a resource. In turn, the security graph may update an alert generated based on determining that a resource has a reachability path through a public network.

[0059] At S360, a report is generated based on the execution of the generated instruction. In an embodiment, the report may be generated by the active inspector, which performs this method. In certain embodiments, generating a report may include updating a log with network traffic between the active inspector and the resource. For example, the active inspector may record (e.g., write to a log) the generated instruction, the resource identifier, and a response received from the resource. A response may include, for example, a response code. A response code may indicate success, redirection, client error, server error, and the like, where the client is the active inspector, and the server is the resource. In certain embodiments the security graph stored in the security DB 122 may be updated based on the determined viability of the network paths. For example, if a resource is successfully accessed, or successfully un-accessed (i.e., an attempt was made to access the resource and the attempt was not successful in accessing the

resource), this result can be stored as an attribute of a node representing the resource in the security graph. For example, the VM node 240 of Fig. 2 may have an attribute which indicates a reachability status, which may have values corresponding to: successfully reached (i.e., an active inspector successfully accessed this resource), successfully not reach (i.e., an active inspector was not successful in accessing this resource), and undetermined (the active inspector has not yet attempted to access the resource through a network path). In some embodiments, certain network paths may be determined (i.e., as viable or unviable) while others may be undetermined. A node may be associated with a plurality of network paths, each having its own active inspection indicator.

[0060] In some embodiments, the active inspector may communicate with a virtual private network (VPN) or a proxy, in order to mask the IP address from which the active inspector is attempting access. This may be useful to test, for example, if a firewall, such as represented by the firewall node 220 of Fig. 2, will let communication through based on blocking or allowing certain IP addresses. In such embodiments, multiple similar instructions may be generated, each originating from a different IP address of the active inspector.

[0061] In some embodiments network path may include a plurality of resources. The method above may be performed on each resource of the plurality of resources, to determine the reachability of each resource.

[0062] Utilizing an active inspector using network paths generated from a security graph is advantageous, as attempting to access resources in this manner to determine the viability of a network path (i.e., reachability) requires less resources than, for example, randomly guessing network paths in an attempt to access resources.

[0063] In certain embodiments the active inspector may generate a screenshot of a user interface used to access the resource through the network path. Fig. 5 below is one such example of a screenshot of a user interface, implemented in accordance with an embodiment.

[0064] Furthermore, utilizing the active inspector to validate network paths and updating the security graph with the results allows to detect workloads which both contain a vulnerability, and have a validated network path. This allows generating an alert to a user of the cloud environment in order to address such problems by accurately characterizing

cybersecurity threats. This in turn allows to utilize resources more efficiently, since the most vulnerable gaps in the cloud environment will be addressed first.

[0065] Fig. 4A is an example flowchart 400 depicting a method for determining reachable properties of security objects, according to an embodiment. A reachable property defines if and how an object on the generated security graph can be reached from an external or internal network, and/or an external or internal object. External means outside of the cloud environment of an organization. An object may be any computing or network object designated in a security graph generated as discussed above.

[0066] At S405, a security graph is accessed or otherwise obtained from the graph database. Within a security graph, various objects or entities, as may be included in a network or cloud environment of an organization, may be represented as “nodes” or “vertices,” and such “nodes” or “vertices” may be interconnected by one or more “links” or “edges,” the “links” or “edges” representing the relationships between the various objects included in a network or environment. Each object in the graph may be associated with known properties of the object. Examples for such properties may include an object’s name, its IP address, various predefined security rules or access rules, and the like.

[0067] At S410, possible network paths within the obtained security graph are identified. A network path is a connection of two or more security objects accessible from an external or internal network, and/or an external or internal object. That is, a network path may include sequential representations of possible data/control flows between two or more objects in a graph. In an embodiment, where two objects in a graph are represented as vertices, and where the vertices are joined by an edge, a path may be constructed between the two vertices. A path may be a vertex-only path, describing a sequence of vertex-to-vertex “hops,” an edge-only path, describing only the edges included in the sequence without description of the associated vertices, or a combined edge-vertex path, describing both edges and vertexes included in the sequence.

[0068] According to disclosed embodiments, a path shows a connection between security objects and/or computing objects that communicate over a network. An object may be a virtual, physical, or logical entity.

[0069] In an embodiment, paths can be identified by traversing the security graph. The traversal can start or end at objects that are connected to an external network (the

internet). The traversal of the security graph can be performed using solutions disclosed in the related art, e.g., a breadth-first search (BFS), a tree traversal, and the like, as well as any combination thereof.

[0070] In another embodiment, paths can be identified by querying the graph database storing the security graph. Examples of applicable queries include, without limitation, queries configured to identify all paths between a first graph object (node) and a second graph object, queries configured to identify all paths between all graph vertices of a first object type and all graph vertices of a second object type, other, like, queries, and any combination thereof.

[0071] Following as performed at S410 through S430, the list of paths are iteratively identified to determine the reachability properties of the path. Specifically, at S415, a path list is populated to include all identified paths. A path list may be a table, list, or other type of data structure. A path list may be unordered or ordered, including ordering according to one or more path properties.

[0072] At S420, a path from the path list is selected. At a first run of the method a first path in the list is selected.

[0073] At S425, path elements are analyzed to determine reachable properties. Path element analysis, as at S425, is an iterative analysis of each element included in the path selected at S420. The operation of S425 is discussed in detail with reference to Fig. 4B.

[0074] At S430, it is determined whether the last path of the path list has been analyzed, and if so, execution terminates; otherwise, execution returns to S420.

[0075] Fig. 4B is an example flowchart S425 depicting the analysis of a network path to determine reachable properties of objects included in the path, according to an embodiment.

[0076] At S455, elements within a selected network path are identified. Elements are network and/or computing objects and relationships (or connections) between such objects. Identification of elements within the selected path may include, without limitation, identification based on properties, and other, like, data, included in the elements, identification of elements based on element identifications provided during the execution of S410 of Fig. 4A, above, and the like, as well as any combination thereof. Further, identification of in-path elements may include identification of element properties or

attributes including, without limitation, names, network addresses, rulesets, port configurations, and the like, as well as any combination thereof.

[0077] Then, at S460 through S480, the list of paths are iteratively processed in order to determine reachable properties of the elements. Specifically, at S460, the next element is selected. The next element is a subsequent element of the set of elements, within the selected path, identified at S455. Where execution of S460 follows the execution of S480, the next element may be an element which, in the selected network path, immediately follows the element relevant to the preceding execution of S470 and S475. Where execution of the method described with respect to Fig. 4B includes a first execution of S460, the first execution of S460 may include the selection of a first element of the selected path.

[0078] For exemplary purposes, a network path may be a path from a virtual machine (VM), connected to a NIC, connected to a load balancer, connected to a firewall. According to a first example, where S460 is executed for the first time, the first execution of S460 may include the selection of the VM as the selected element. Further, according to a second example, where execution of S460 follows execution of S480, selection of a next element at S460 may include selection of, following the VM, selection of the NIC, or, following the NIC, selection of the load balancer, or, following the load balancer, selection of the firewall.

[0079] At S465, it is determined whether the selected element has been analyzed. Determination of whether the selected element may include the determination of whether one or more reachable properties are included in the relevant graph element. As execution of S475 provides for the population of reachable properties into the security graph, an element which does not include such reachable properties in the graph may be assumed to have not been analyzed.

[0080] Where, at S465, it is determined that the selected element has been analyzed, execution continues with S460. Where, at S465, it is determined that the selected element has not been analyzed, execution continues with S470.

[0081] At S470, reachable properties are determined. Reachable properties are object properties describing if, and how, a given path element is reachable through the selected path, and, specifically, from an external network, an internal network, both, and a

combination thereof. Examples of reachable properties include, without limitation, binary properties describing whether an element is reachable, protocols by which the element is reachable, network addresses at which an element is reachable, ports by which an element is reachable, access rules, and the like, as well as any combination thereof.

[0082] In an embodiment, a reachable property is determined as a minimal set of reachable properties of all other objects in the path. As a simple example, if a path includes two objects, where one object can receive traffic from any source IP address through port 1515, and the other object can receive traffic only from a source IP address of 173.54.189.188, the reachable property of the second object may be that the second object is reachable through “source IP address 173.54.189.188 and port 1515.”

[0083] At S475, reachable properties are populated into the security graph. Reachable properties, as may be determined at S470, may be populated into the graph by processes including, without limitation, labeling or tagging graph vertices (or “nodes”), updating network or graph object properties, generating one or more graph overviews, layers, or graph-adjacent data features, and the like, as well as any combination thereof.

[0084] In an embodiment, population of reachable properties into the security graph may include, for each object, population of object network access control lists (NACLs) as described hereinbelow, into the security graph elements corresponding with the various path elements, as well as the population of scope specific NACLs, and other, like, properties into the graph. Scope-specific NACLs are NACLs describing object, path, or network accessibility properties specific to a given scope, where a given scope may be the internet, various given accounts, various given environments, and the like. Scope-specific NACLs may, for example, describe the properties of an object with respect to the object’s internet accessibility, where the object may be configured to include different access control properties for internet access and local intranet access.

[0085] Further, population of reachable properties into the graph may include population of one or more paths into the graph, including by population processes similar or identical to those described with respect to population of individual objects. Population of paths into the graph may include, without limitation, population of one or more paths into the graph, including a presently-analyzed path, population of one or more path properties, and the like, as well as any combination thereof. Path properties, as may be populated to

a graph, are properties describing various attributes of a path, including, without limitation, NACLs applicable to path elements, path segments, or full paths, including full-path aggregate NACLs, and the like, as well as any combination thereof. Further, population of path properties into the graph may include the population of one or more scope-specific path properties, where such scope-specific path properties may be properties relevant to specific scopes, such as those described herein.

[0086] Where population of reachable properties includes labeling or tagging a graph, or elements thereof, one or more graph vertices or edges, the corresponding objects or relationships, or both, may be labeled, tagged, or otherwise associated with one or more data features describing relevant reachable properties. In addition, where population of reachable properties to the graph includes updating graph objects, graph vertices and edges, the corresponding objects and relationships, or both, may be directly updated to explicitly include the calculated properties.

[0087] Further, where population of reachable properties includes the generation of one or more graph layers or overlays, the generated graph layers or overlays may be data features independent of, but corresponding to, the relevant graphs, where the generated overlays or layers may include one or more data features describing the reachable properties of the various graph elements.

[0088] At S480, it is determined whether all elements in the selected path have been analyzed. Determination of whether all elements in the selected path have been analyzed may include, without limitation, determination of whether the immediately preceding execution of S475 relates to the last element in the selected path, determination of whether additional elements remain in the path, determination of whether any additional in-path elements have been analyzed, and the like, as well as any combination thereof.

[0089] Where, at S480, it is determined that all elements in the selected path have not been analyzed, execution continues with S460. Where, at S480, it is determined that all elements in the selected path have been analyzed, execution terminates.

[0090] Fig. 5 is an example of a screenshot 500 generated by an active inspector, implemented in accordance with an embodiment. A screenshot is an image which shows the contents of a computer display. In an embodiment, an active inspector, such as the active inspector 125 of Fig. 1, may include a web browser application for executing access

instructions. The web browser application may generate a user interface intended for a display. The screenshot 500 includes a portion of such a user interface, which includes a response header 510 received based on a request to access a resource. In this case the response header 510 includes an HTTP code 403 (i.e., forbidden), meaning that the request to access the resource was denied. A detailed code 512 includes a message which is associated with the 403 code (i.e., "access denied"), a message 514, a request identifier 516, and a host identifier 518.

[0091] Fig. 6 is an example schematic diagram of an active inspector 125 according to an embodiment. The active inspector 125 includes a processing circuitry 610 coupled to a memory 620, a storage 630, and a network interface 640. In an embodiment, the components of the active inspector 125 may be communicatively connected via a bus 650.

[0092] The processing circuitry 610 may be realized as one or more hardware logic components and circuits. For example, and without limitation, illustrative types of hardware logic components that can be used include field programmable gate arrays (FPGAs), application-specific integrated circuits (ASICs), Application-specific standard products (ASSPs), system-on-a-chip systems (SOCs), graphics processing units (GPUs), tensor processing units (TPUs), general-purpose microprocessors, microcontrollers, digital signal processors (DSPs), and the like, or any other hardware logic components that can perform calculations or other manipulations of information.

[0093] The memory 620 may be volatile (e.g., random access memory, etc.), non-volatile (e.g., read only memory, flash memory, etc.), or a combination thereof.

[0094] In one configuration, software for implementing one or more embodiments disclosed herein may be stored in the storage 630. In another configuration, the memory 620 is configured to store such software. Software shall be construed broadly to mean any type of instructions, whether referred to as software, firmware, middleware, microcode, hardware description language, or otherwise. Instructions may include code (e.g., in source code format, binary code format, executable code format, or any other suitable format of code). The instructions, when executed by the processing circuitry 610, cause the processing circuitry 610 to perform the various processes described herein.

[0095] The storage 630 may be magnetic storage, optical storage, and the like, and may be realized, for example, as flash memory or other memory technology, compact disk- read only memory (CD-ROM), Digital Versatile Disks (DVDs), or any other medium which can be used to store the desired information.

[0096] The network interface 640 allows the active inspector 125 to communicate with, for example, a cloud environment, a security graph database, resources from the cloud environment, and the like.

[0097] It should be understood that the embodiments described herein are not limited to the specific architecture illustrated in Fig. 6, and other architectures may be equally used without departing from the scope of the disclosed embodiments.

[0098] Fig. 7 is an example flowchart of a method for detecting a technology stack utilizing active inspection, implemented in accordance with an embodiment. Technology stack is a term used to describe application, operating systems, and the like which are installed or deployed on a resource, such as a virtual machine, which in turn is deployed in a cloud computing environment. For example, Nginx® deployed on a virtual machine having a Linux® operating system has a technology stack (also referred to as a tech stack) which includes Nginx and Linux.

[0099] At S710, a reachable first resource is selected. In an embodiment, a reachable first resource may be selected from a list of reachable resources. The list may be stored, for example, as a table in a database. The list may include an identifier of each reachable resource, and at least one viable network path. A reachable resource is a resource which is reachable from an external network, in that the external network is external to a cloud computing environment in which the resource is deployed. In an embodiment, a reachable resource includes a network path, reachability parameters, and the like, for example as discussed in more detail above. A reachable resource is a resource which includes at least a viable network path, having reachability parameters which allow access from an external network to the resource, the resource deployed in a cloud computing environment. In an embodiment, a security graph may be queried to generate a result which includes at least a reachable resource. In certain embodiments, the generated result includes a plurality of reachable resources, each having its own at least a viable

network path. In other embodiments, the result includes a plurality of network paths for a reachable resource (i.e., the resource is reachable from a plurality of network paths).

[0100] At S720, a network protocol is detected for the reachable first resource. In an embodiment, the network protocol is a transport layer protocol. For example, the network protocol may be any one of: a TCP protocol, and a UDP protocol. In an embodiment, the network protocol is any one of: hypertext transfer protocol (HTTP), file transfer protocol (FTP), secure shell (SSH), simple mail transfer protocol (SMTP), post office protocol (POP3), internet message access protocol (IMAP), internet relay chat (IRC), HTTP secure (HTTPS), and the like. In certain embodiments, a port may be determined for the network protocol. For example, the first reachable resource may be indicated as listening on (or having open) any one of port: 80, 20, 21, 22, 25, 110, 143, 194, 443, and the like. A port is a communication endpoint, and may be implemented as a 16-bit number.

[0101] In some embodiments, a security graph may be queried to determine if the reachable first resource includes an open port. A resource will not actively listen on all ports, as this is over sixty-five thousand different port numbers which are possible. In an embodiment, determining that a resource is actively listening on a port may be determined as part of the reachability parameters, for example as detailed above.

[0102] An open port is a port which a resource is actively listening for network traffic. While certain ports are considered well known ports (i.e., port 80 is used for HTTP) most are open for general use. Some network ports may be used by multiple applications. For example, port 6600 is used by Microsoft® Hyper-V Live, and by Music Player Daemon, which are two separate applications. Therefore, knowing that a port, or range of ports, is open, does not necessarily indicate what applications are deployed on the first resource.

[0103] As another example, port 8080 is used as an alternative for HTTP, used by Apache® Tomcat, and by Atlassian® JIRA applications. Therefore, knowing that a machine is listening on port 8080 does not indicate what applications are present.

[0104] At S730, an access instruction for accessing an application of the first resource is generated. In an embodiment the access instruction is based on the network protocol. In certain embodiments, accessing the first resource includes providing the first resource with credentials which allow access to the first resource. For example, a private key may allow accessing an SSH server. As another example, an API gateway, such as the API

gateway 230 of Fig. 2 may be accessed by providing credentials. As yet another example, a load balancer (first resource) may provide access to a server (second resource), which listens on an application address. For example, an SSH server may be exposed behind a load balancer, listening on a local application address (e.g., 10.0.0.115). By accessing the load balancer, which includes an external network path, and from there accessing the application address, an attacker may gain access to the SSH server. In certain embodiments, the access instruction is generated based on a predetermined application which is associated with a port number. For example, a table may include a port number in a first column, and a network protocol in a corresponding second column.

[0105] In the example above, the first column may indicate 8080, the second column HTTP, another second column Tomcat, and the like. In some embodiments, a predetermined instruction may be stored which corresponds to the predetermined application. For example, the predetermined application may be HTTP, and the predetermined instruction may be a GET command. The access instruction may be further generated based on the predetermined instruction.

[0106] At S740, an application is discovered based on a response to the access instruction. In an embodiment, the access instruction, when executed, configures a computing device to initiate a communication over the network path. A response may be, for example, an ack (acknowledgement), which is received from the first resource in response to the access instruction. In an embodiment, a response to an HTTP request may include a status code, such as 500, 404, 200, 202, and the like. In certain embodiments, a security graph may be updated based on the discovered application.

[0107] In an embodiment, an application node may be generated in a security graph to represent the discovered application. The application node may be connected with an edge to a resource node representing the reachable first resource node, on which the application is deployed.

[0108] Discovering an application using the methods described herein allows to validate a tech stack as part of an external attack surface management (EASM) procedure in an efficient way, since only ports which are indicated, for example by static analysis, as being open are inspected to determine if access may occur. In an embodiment, only predetermined applications are checked for each open port, which further reduces the

number of access instructions required to probe open ports, as the alternative is to test each probe for each application, which can easily result in hundreds of thousands of access instructions required to determine what applications are deployed on just a single resource.

[0109] At S750, a check is performed to determine if an additional network protocol should be checked. If 'yes' execution may continue at S720. Otherwise, execution may terminate. In an embodiment, the check may be further performed based on a response received based on execution of the access instruction. For example, if the access instruction was not successful, a second access instruction may be generated for example for the same port using a different protocol. In an embodiment the access instruction, second access instruction, and the like, are delivered over the network path of the reachable first resource.

[0110] Fig. 8 is an example flowchart 800 of a method for detecting application paths, according to an embodiment. An application path is a path an attacker may use when gaining access to a cloud computing environment, which includes a first resource through which the attacker gains access to the cloud computing environments, and subsequent second resources which the attacker is able to access in the cloud computing environment, after gaining access to the first resource, wherein the first resource corresponds to a virtual machine, container, and the like, and the second resource corresponds to an application executed (or deployed) on the first resource. In an embodiment, detecting an application path includes detecting a vulnerability which allows to reach a first resource, gain access to it, and through the first resource gain access to a second resource which is accessible to the first resource, but should not be accessible, for example, to the user account or service account accessing the first resource.

[0111] At S810, a reachable first resource is selected. In an embodiment, a reachable first resource may be selected from a list of reachable resources. The list may be stored, for example, as a table in a database. The list may include an identifier of each reachable resource, and at least one viable network path. A reachable resource is a resource which is reachable from an external network, in that the external network is external to a cloud computing environment in which the resource is deployed. In an embodiment, a reachable resource includes a network path, reachability parameters, and the like, for example as

discussed in more detail above. A reachable resource is a resource which includes at least a viable network path, having reachability parameters which allow access from an external network to the resource, the resource deployed in a cloud computing environment. In an embodiment, a security graph may be queried to generate a result which includes at least a reachable resource. In certain embodiments, the generated result includes a plurality of reachable resources, each having its own at least a viable network path. In other embodiments, the result includes a plurality of network paths for a reachable resource (i.e., the resource is reachable from a plurality of network paths).

[0112] At S820, the first resource is accessed. In an embodiment, accessing the first resource includes providing the first resource with credentials which allow access to the first resource. For example, a private key may allow accessing an SSH server. As another example, an API gateway, such as the API gateway 230 of Fig. 2 may be accessed by providing credentials. As yet another example, a load balancer (first resource) may provide access to a server (second resource), which listens on an application address. For example, an SSH server may be exposed behind a load balancer, listening on a local application address (e.g., 10.0.0.115). By accessing the load balancer, which includes an external network path, and from there accessing the application address, an attacker may gain access to the SSH server.

[0113] At S830, a second resource is selected. In an embodiment, the second resource is an application exposed through the first resource. In an embodiment a security graph is queried to determine the second resource. In some embodiments, the cloud computing environment in which the first resource is deployed is represented in the security graph, for example as detailed in Fig. 2 above. In some embodiments, querying the security graph includes causing a query to be executed on a database hosting the security graph, and receiving as a result an identifier of a node which represents a second resource which is connected to the node representing the first resource.

[0114] For example, a security graph may be traversed to detect a node representing an application (application node) which is connected to the node representing the first resource. A second network path may be determined, to the application node from the first resource node. For example, the first resource may be accessed by accessing "example.com:80," while the second resource (i.e., application node) is accessed by

using an application address, or other listening address. In an embodiment, an application may be predetermined to be listening on an address, port, and the like. The second network path may be generated based on the predetermined listening.

[0115] As another example, the application node may indicate that a web server application (second resource) is deployed on a virtual machine (first resource). An access attempt may include generating an access instruction on the first resource (first network path) using port 80 (second network path), which is a predetermined port used for Internet web traffic.

[0116] At S840, the second resource is actively determined to be reachable via the first resource. In an embodiment, a second resource is reachable from the first resource, if the first resource can be used to access the second resource. In the example above, if the web server is reachable through the virtual machine, then the web server is reachable. Thus, if the first resource is a reachable resource, meaning that a network path is found which is viable, and the second resource is accessible from the first resource, then an attacker which gains access to the first resource may also gain access to the second resource. Thus, while the second resource may not have a direct viable network path, it can still become reachable by accessing the first resource, meaning that there is a second network path, which is the network path between the first resource and the second resource. In an embodiment, a resource is accessible if, for example, it can be sent instructions which are then executed by the resource. For example, a SQL database may be determined to be reachable if a network path is determined to a virtual machine hosting the SQL database application, and a second network path allows access to the SQL database (i.e., application path), and further an instruction for performing an SQL injection is generated for execution by the SQL database application.

[0117] At optional S850, a security graph is updated based on the determination. In some embodiments, a node may include an indicator to indicate if a resource is reachable. In other embodiments, an edge may be added between a node representing the first resource and a node representing the second resource, to indicate that the second resource is reachable from the first resource. Actively inspecting second resources in this manner allows to detect certain vulnerabilities in a cloud computing environment, which is of course desirable.

[0118] At S860, a check is performed to determine if another second resource should be checked for reachability from the first resource. In an embodiment execution continues at S840 if another resource should be checked to determine reachability, otherwise execution terminates. For example, if another application is determined to be deployed on the first resource, e.g., by traversing a security graph and detecting another application node connected to the first resource node, a second application path may be determined and reachability thereto may be determined by performing the method detailed herein.

[0119] Fig. 9 is an example flowchart of a method for applying a policy on a network path. According to an embodiment, a network path includes resources, protocols, interfaces, combinations thereof, and the like, between a first resource in a cloud computing environment, and another interface, such as an interface of another computing device, an application programming interface (API), a second resource, and the like. In some embodiments, the network path is between the first resource and includes a network portion of a public network, such as the Internet.

[0120] According to some embodiments, it is advantageous to determine if a network path is a valid network path, i.e., a network path through which a resource is really reachable, as opposed to an invalid network path, which seems reachable, but in practice cannot be used to access the resource. For example, a resource might be listening on a certain port, which is blocked by a load balancer deployed on the network path of the resource. Therefore, the resource would seem to be accessible through the port, when in practice, it is not.

[0121] Therefore, in some embodiments, it is advantageous to determine which network paths, reachability paths, application paths, and the like, are valid paths, for example by performing active inspection of the same, as detailed above.

[0122] Furthermore, it is advantageous, in certain embodiments, to apply a policy on a network path, so that certain paths which are viable paths, and should not be viable paths, are addressed as cybersecurity threats. Also, it is further advantageous to apply such a policy, in some embodiments, only on a network path which is a valid network path, for example in order to reduce a number of alerts which are generated by a cybersecurity system, since a network path which is not a viable (or reachable) path is a network path which does not currently pose a cybersecurity threat, according to some embodiments.

[0123] At S910, a reachable first resource is selected. In an embodiment, a reachable first resource is selected from a list of reachable resources. In an embodiment, the list is stored, for example, as a table in a database. In some embodiments, the list includes an identifier of each reachable resource, and at least one viable network path.

[0124] In certain embodiments, a reachable resource is a resource which is reachable from an external network, in that the external network is external to a cloud computing environment in which the resource is deployed. In an embodiment, a reachable resource includes a network path, reachability parameters, and the like, for example as discussed in more detail above.

[0125] According to an embodiment, a reachable resource is a resource which includes at least a viable network path, having reachability parameters which allow access from an external network to the resource, the resource deployed in a cloud computing environment. For example, in an embodiment, the external network is a public network, such as the Internet.

[0126] In an embodiment, a security graph is queried to generate a result which includes at least a reachable resource. In certain embodiments, the generated result includes a plurality of reachable resources, each having a respective at least a viable network path. In some embodiments, the result includes a plurality of network paths for a reachable resource (i.e., the resource is reachable from a plurality of network paths).

[0127] At S920, active inspection of a network path is initiated. In an embodiment, the network path is a network path of the selected reachable first resource. In some embodiments, active inspection of the network path includes the methods described in more detail herein. For example, according to an embodiment, active inspection of the reachable first resource includes providing credentials which allow access to the first resource. For example, a private key may allow accessing an SSH server. As another example, an API gateway, such as the API gateway 230 of Fig. 2 is accessed by providing credentials, according to an embodiment.

[0128] As yet another example, a load balancer (first resource) is configured to provide access to a server (second resource), which listens on an application address. For example, an SSH server may be exposed behind a load balancer, listening on a local application address (e.g., 10.0.0.115). By accessing the load balancer, which includes an

external network path, and from there accessing the application address, an attacker may gain access to the SSH server.

[0129] In an embodiment, active inspection includes generating an instruction which when executed configures a computing device to send a data packet through a network path. In certain embodiments, the data packet, a plurality of data packets, and the like, include an instruction which when executed by the reachable resource configure the resource to generate a response to the instruction.

[0130] At S930, a policy is applied on a valid network path. In some embodiments, an active inspector is configured to determine that a network path is a valid network path. In certain embodiments, in response to determining that a network path is a valid network path, the active inspector is further configured to apply a policy to the network path.

[0131] In some embodiments, applying a policy on a network path includes applying a conditional rule. For example, in some embodiments, applying the policy on a network path includes generating an instruction which, when executed, generates an output on which the conditional rule can be applied.

[0132] In certain embodiments, the instruction includes an additional active inspection. For example, according to an embodiment, a policy includes a statement that a network path to/from a first reachable resource should only be accessible via a predefined port (e.g., port 80) using a predefined protocol (e.g., HTTPS). In some embodiments, where a viable network path is detected, the policy is applied to determine if the network path adheres to the policy or not.

[0133] For example, in such an embodiment, an active inspection instruction is generated which, when executed, configures the active inspector to attempt to access the first reachable resource over the network path, using port 8080 and HTTPS. As another example, the action inspection instruction, when executed, configures the active inspector to attempt to access the first reachable resource over the network path, using port 80 and HTTP (which is the unsecure version of HTTPS).

[0134] In some embodiments, a plurality of active inspection instructions are generated and executed, to determine if the policy is adhered to. In some embodiments, a policy includes an exception. For example, in certain embodiments, a certain resource is exempt from a certain policy a priori. In some embodiments, a policy exemption is generated based on

a list of predefined resources, resource types, a combination thereof, and the like, which are exempt from a particular policy, a particular policy type, a combination thereof, and the like.

[0135] In certain embodiments, active inspection is further performed to detect an application path. In some embodiments, the policy is applied to the application path, the network path, a combination thereof, and the like. For example, in some embodiments, a policy includes a statement such that a valid network path violates the policy, however an application path utilizing the network path, allows to create an exemption for the network path. For example, a policy includes a statement, according to an embodiment, that no resource should allow communication over port 80, unless the communication is specifically for a predefined application which is configured to communicate over this port.

[0136] At S940, a check is performed to determine if a condition is met. In an embodiment, the condition is a condition of the policy, such as a conditional rule. In some embodiments, the condition includes determining if the policy is adhered to by the network path. In some embodiments, this is determined, for example, as detailed above (e.g., by applying a rule and checking the result of the outcome). Where the condition is satisfied (e.g., the network path adheres to the policy), execution continues at S920, according to an embodiment. In certain embodiments, where the condition is not satisfied (e.g., the network path does not adhere to the policy), execution continues at S950.

[0137] At S950, a mitigation action is initiated. In some embodiments, the mitigation action includes generating a policy exemption. In certain embodiments, the mitigation action includes revoking access to the reachable resource, revoking access from the reachable resource, closing a port of the reachable resource, generating a notification, generating an alert, any combination thereof, and the like.

[0138] The various embodiments disclosed herein can be implemented as hardware, firmware, software, or any combination thereof. Moreover, the software is preferably implemented as an application program tangibly embodied on a program storage unit or computer readable medium consisting of parts, or of certain devices and/or a combination of devices. The application program may be uploaded to, and executed by, a machine comprising any suitable architecture. Preferably, the machine is implemented on a computer platform having hardware such as one or more central processing units

(“CPUs”), a memory, and input/output interfaces. The computer platform may also include an operating system and microinstruction code. The various processes and functions described herein may be either part of the microinstruction code or part of the application program, or any combination thereof, which may be executed by a CPU, whether or not such a computer or processor is explicitly shown. In addition, various other peripheral units may be connected to the computer platform such as an additional data storage unit and a printing unit. Furthermore, a non-transitory computer readable medium is any computer readable medium except for a transitory propagating signal.

[0139] All examples and conditional language recited herein are intended for pedagogical purposes to aid the reader in understanding the principles of the disclosed embodiment and the concepts contributed by the inventor to furthering the art, and are to be construed as being without limitation to such specifically recited examples and conditions. Moreover, all statements herein reciting principles, aspects, and embodiments of the disclosed embodiments, as well as specific examples thereof, are intended to encompass both structural and functional equivalents thereof. Additionally, it is intended that such equivalents include both currently known equivalents as well as equivalents developed in the future, i.e., any elements developed that perform the same function, regardless of structure.

[0140] It should be understood that any reference to an element herein using a designation such as “first,” “second,” and so forth does not generally limit the quantity or order of those elements. Rather, these designations are generally used herein as a convenient method of distinguishing between two or more elements or instances of an element. Thus, a reference to first and second elements does not mean that only two elements may be employed there or that the first element must precede the second element in some manner. Also, unless stated otherwise, a set of elements comprises one or more elements.

[0141] As used herein, the phrase “at least one of” followed by a listing of items means that any of the listed items can be utilized individually, or any combination of two or more of the listed items can be utilized. For example, if a system is described as including “at least one of A, B, and C,” the system can include A alone; B alone; C alone; 2A; 2B; 2C; 3A; A

and B in combination; B and C in combination; A and C in combination; A, B, and C in combination; 2A and C in combination; A, 3B, and 2C in combination; and the like.

CLAIMS

What is claimed is:

1. A method for applying a policy on a network path, comprising:
 - selecting a reachable resource having a network path to access the reachable resource, wherein the reachable resource is a cloud object deployed in a cloud computing environment, having access to an external network which is external to the cloud computing environment;
 - actively inspecting the network path to determine if the network path of the reachable resource is accessible from the external network;
 - applying a policy on the accessible network path, wherein the policy includes a conditional rule;
 - initiating a mitigation action, in response to determining that the conditional rule is not met; and
 - applying the policy on another network path, in response to determining that the conditional rule is met.
2. The method of claim 1, further comprising:
 - initiating active inspection for each network path of a plurality of network paths;
 - storing an indicator to indicate that a first network path of the plurality of network paths is a valid path, in response to determining that the reachable resource is accessible from the external network; and
 - applying the policy on the first network path.
3. The method of claim 2, further comprising:
 - initiating active inspection by generating an access instruction for the reachable resource; and
 - executing the access instruction on a network path.
4. The method of claim 2, further comprising:

applying the policy only on each network path of the plurality of network paths which is a valid path.

5. The method of claim 4, further comprising:
initiating active inspection on each network path of the plurality of network paths to determine if the network path is a valid network path.
6. The method of claim 1, further comprising:
initiating the mitigation action on the reachable resource.
7. The method of claim 6, wherein the mitigation action includes any one of: revoking access to the reachable resource, revoking access from the reachable resource, closing a port of the reachable resource, generating a notification, generating an alert, and any combination thereof.
8. The method of claim 1, further comprising:
generating an exception to the policy based on a valid network path.
9. The method of claim 1, further comprising:
initiating active inspection of the network path to detect an application path.
10. The method of claim 9, further comprising:
generating the mitigation action further based on the application path.
11. A non-transitory computer-readable medium storing a set of instructions for applying a policy on a network path, the set of instructions comprising:
one or more instructions that, when executed by one or more processors of a device, cause the device to:
select a reachable resource having a network path to access the reachable resource, wherein the reachable resource is a cloud object deployed in a cloud computing

environment, having access to an external network which is external to the cloud computing environment;

actively inspect the network path to determine if the network path of the reachable resource is accessible from the external network;

apply a policy on the accessible network path, wherein the policy includes a conditional rule;

initiate a mitigation action, in response to determining that the conditional rule is not met; and

apply the policy on another network path, in response to determining that the conditional rule is met.

12. A system for applying a policy on a network path comprising:

a processing circuitry; and

a memory, the memory containing instructions that, when executed by the processing circuitry, configure the system to:

select a reachable resource having a network path to access the reachable resource, wherein the reachable resource is a cloud object deployed in a cloud computing environment, having access to an external network which is external to the cloud computing environment;

actively inspect the network path to determine if the network path of the reachable resource is accessible from the external network;

apply a policy on the accessible network path, wherein the policy includes a conditional rule;

initiate a mitigation action, in response to determining that the conditional rule is not met; and

apply the policy on another network path, in response to determining that the conditional rule is met.

13. The system of claim 12, wherein the memory contains further instructions which when executed by the processing circuitry further configure the system to:

initiate active inspection for each network path of a plurality of network paths;

store an indicator to indicate that a first network path of the plurality of network paths is a valid path, in response to determining that the reachable resource is accessible from the external network; and

apply the policy on the first network path.

14. The system of claim 13, wherein the memory contains further instructions which when executed by the processing circuitry further configure the system to:

initiate active inspection by generating an access instruction for the reachable resource; and

execute the access instruction on a network path.

15. The system of claim 13, wherein the memory contains further instructions which when executed by the processing circuitry further configure the system to:

apply the policy only on each network path of the plurality of network paths which is a valid path.

16. The system of claim 15, wherein the memory contains further instructions which when executed by the processing circuitry further configure the system to:

initiate active inspection on each network path of the plurality of network paths to determine if the network path is a valid network path.

17. The system of claim 12, wherein the memory contains further instructions which when executed by the processing circuitry further configure the system to:

initiate the mitigation action on the reachable resource.

18. The system of claim 17, wherein the mitigation action includes any one of:

revoking access to the reachable resource, revoking access from the reachable resource, closing a port of the reachable resource, generating a notification, generating an alert, and any combination thereof.

19. The system of claim 12, wherein the memory contains further instructions which when executed by the processing circuitry further configure the system to:
generate an exception to the policy based on a valid network path.
20. The system of claim 12, wherein the memory contains further instructions which when executed by the processing circuitry further configure the system to:
initiate active inspection of the network path to detect an application path.
21. The system of claim 20, wherein the memory contains further instructions which when executed by the processing circuitry further configure the system to:
generate the mitigation action further based on the application path.

ABSTRACT

A system and method for applying a policy on a network path is disclosed. The method includes: selecting a reachable resource having a network path to access the reachable resource, wherein the reachable resource is a cloud object deployed in a cloud computing environment, having access to an external network which is external to the cloud computing environment; actively inspecting the network path to determine if the network path of the reachable resource is accessible from the external network; applying a policy on the accessible network path, wherein the policy includes a conditional rule; initiating a mitigation action, in response to determining that the conditional rule is not met; and applying the policy on another network path, in response to determining that the conditional rule is met.

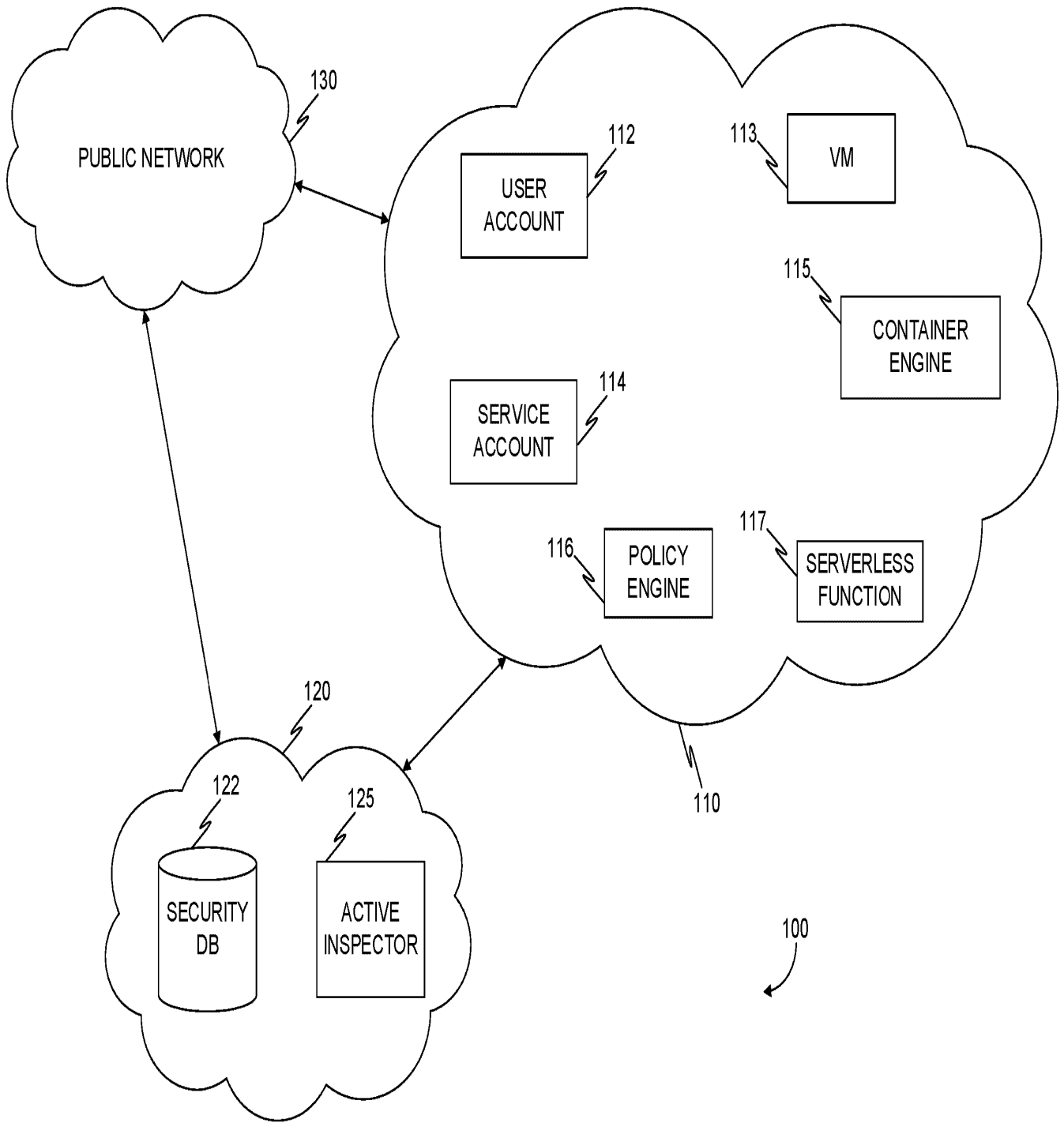


FIG. 1

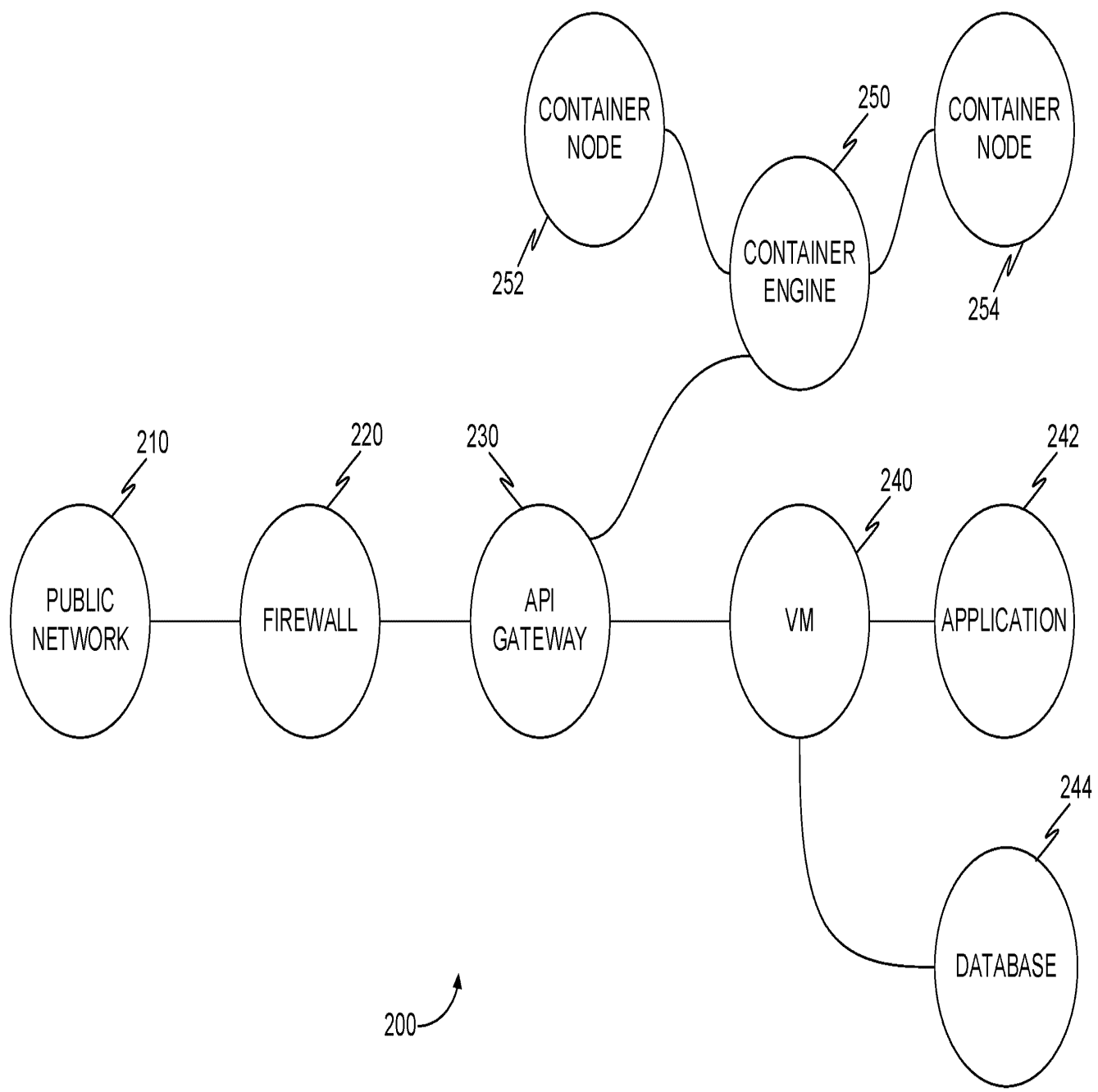


FIG. 2

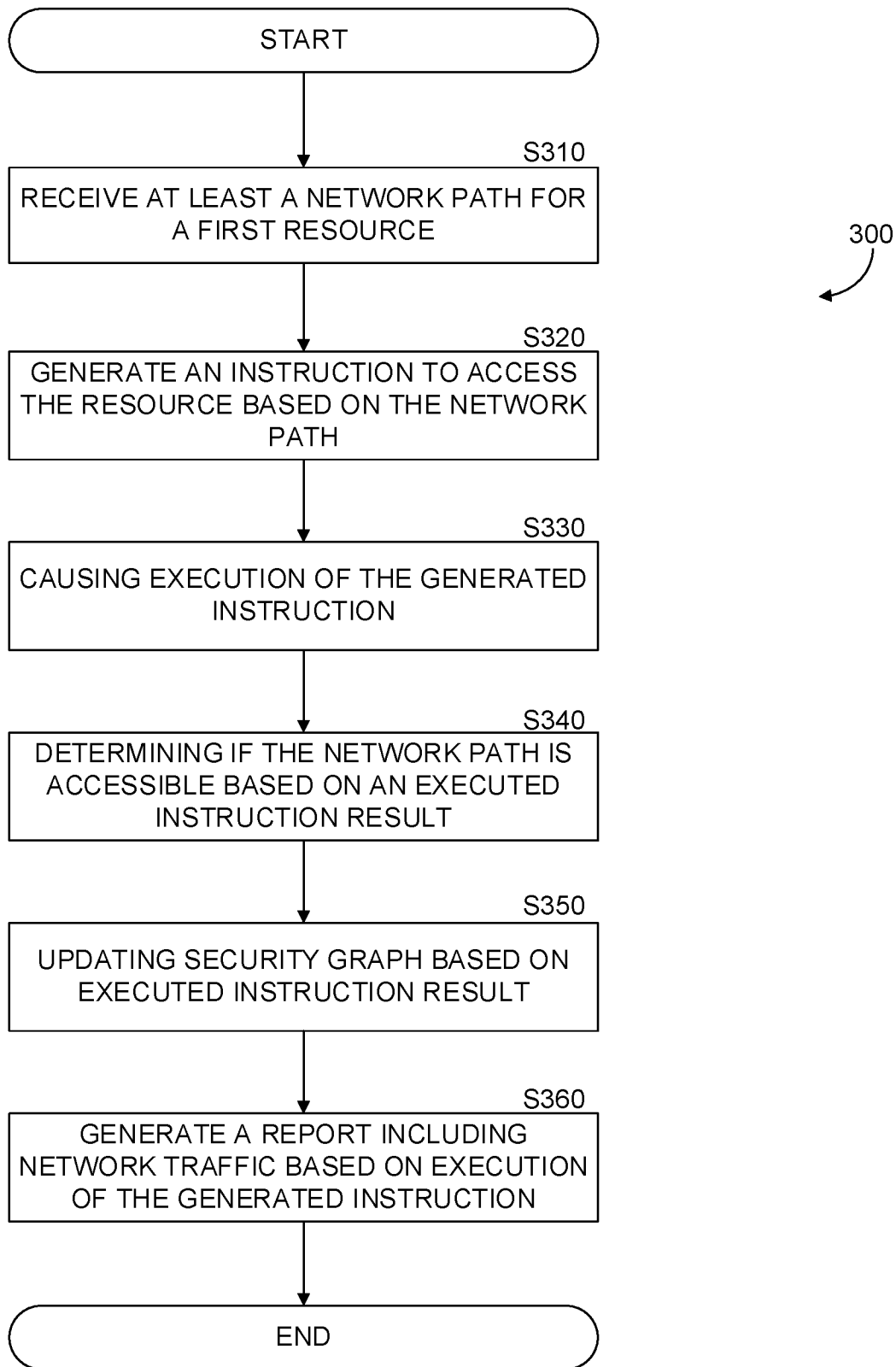


FIG. 3

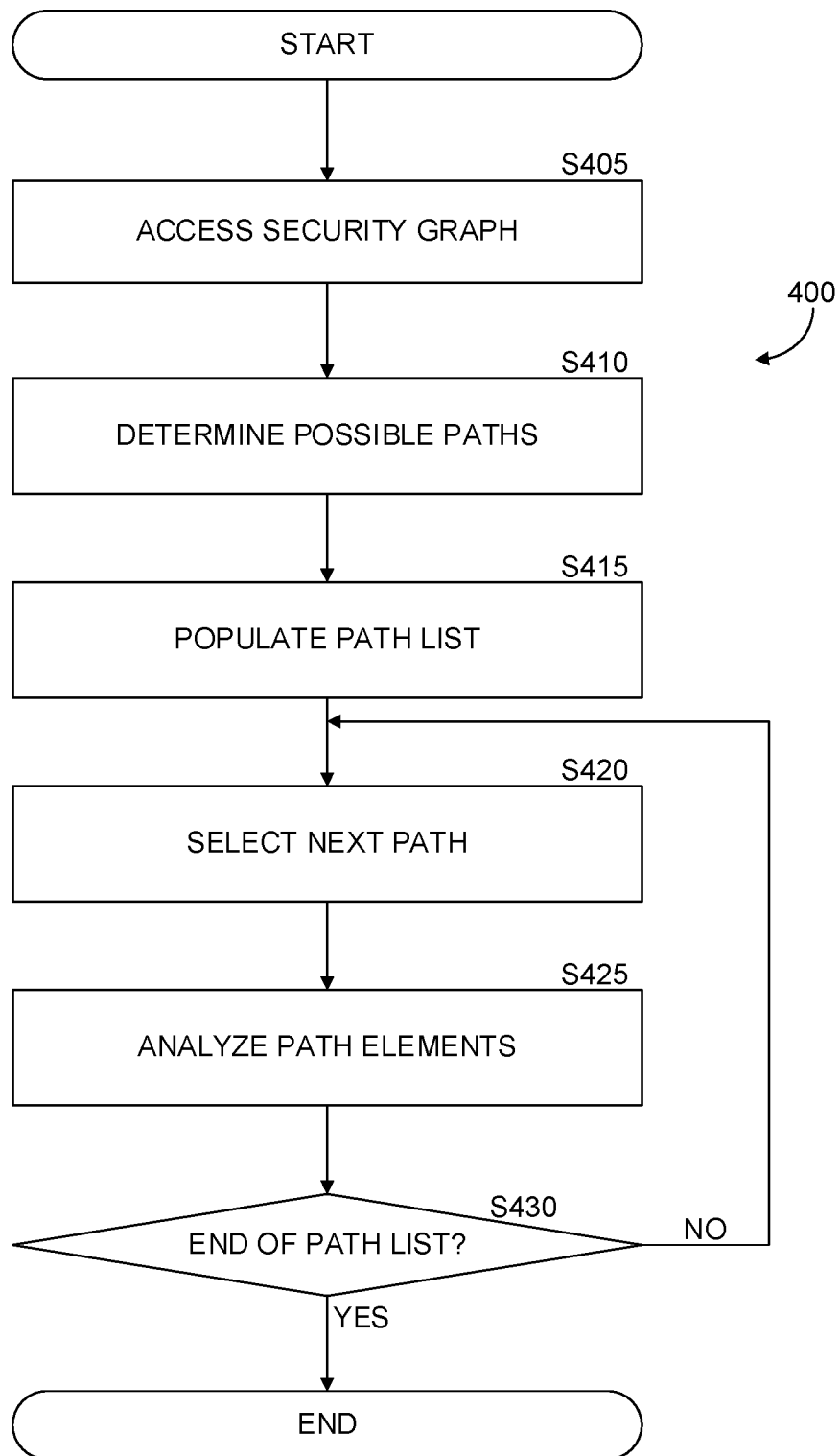


FIG. 4A

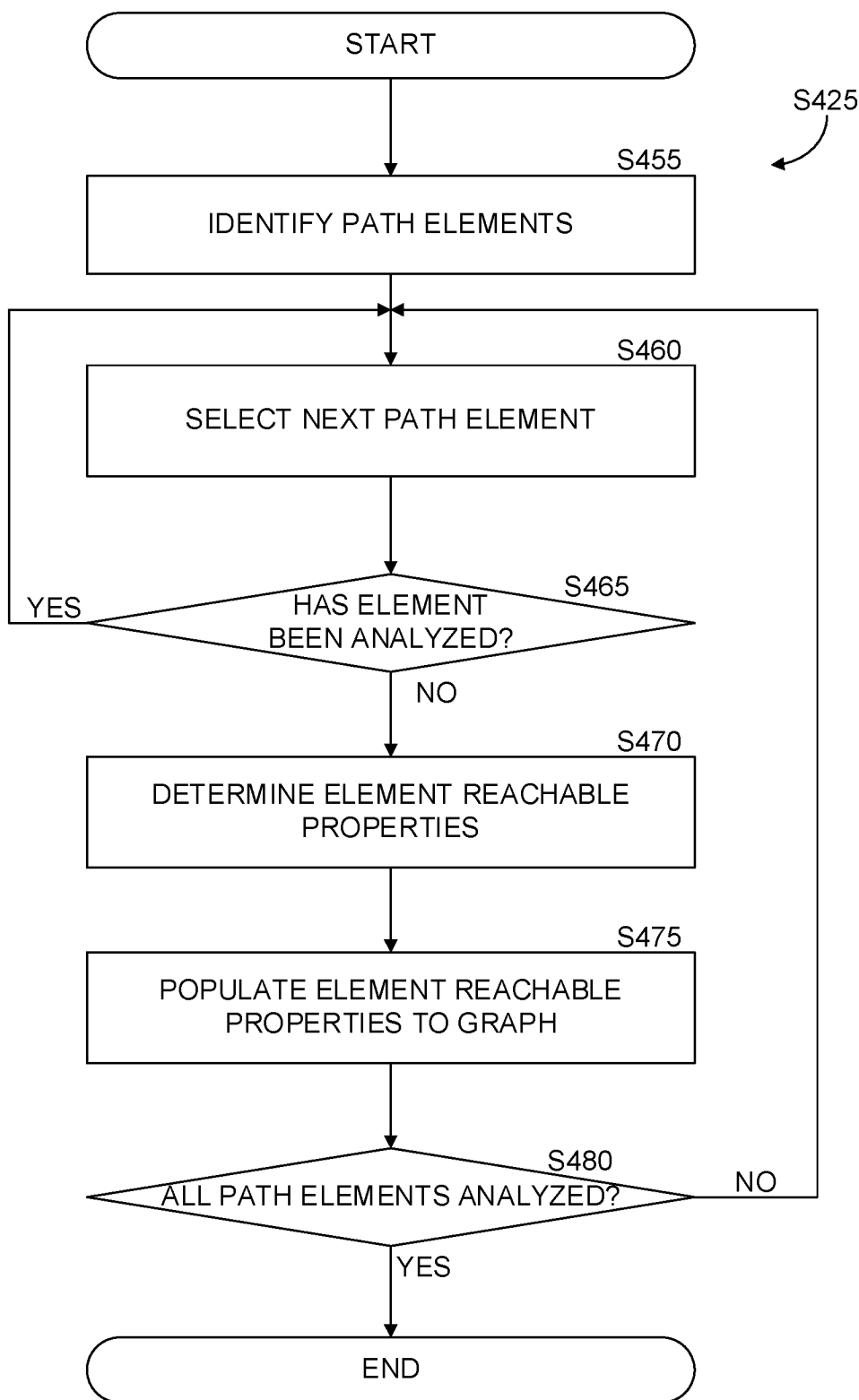


FIG. 4B

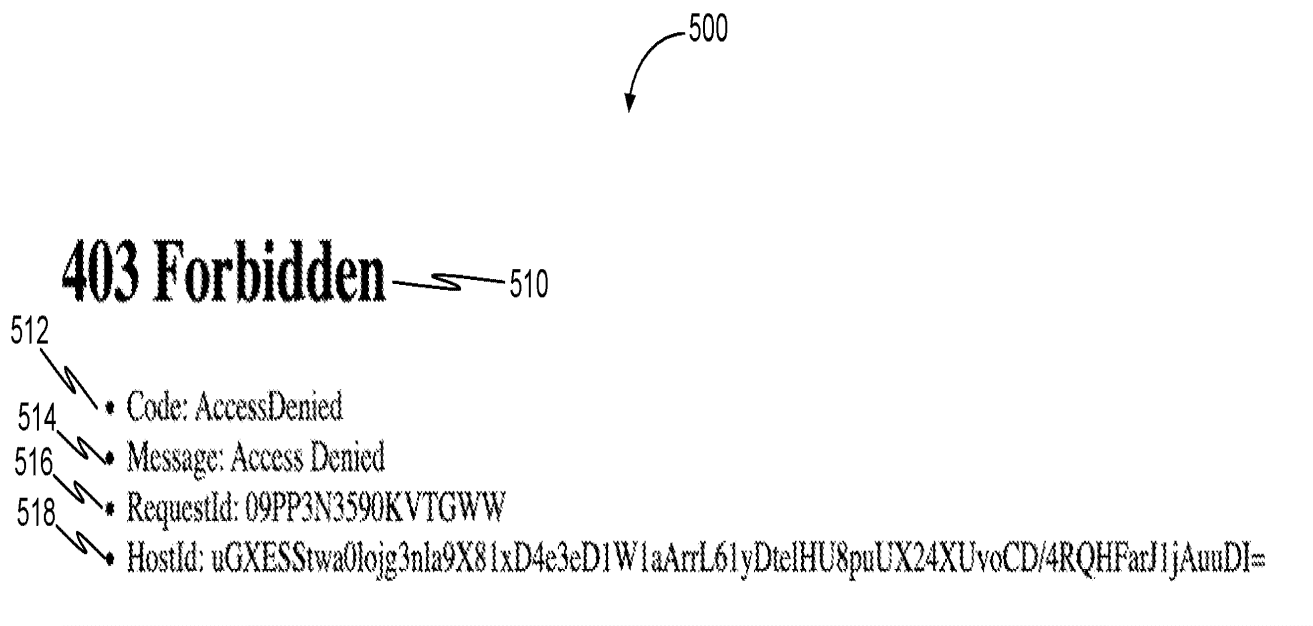


FIG. 5

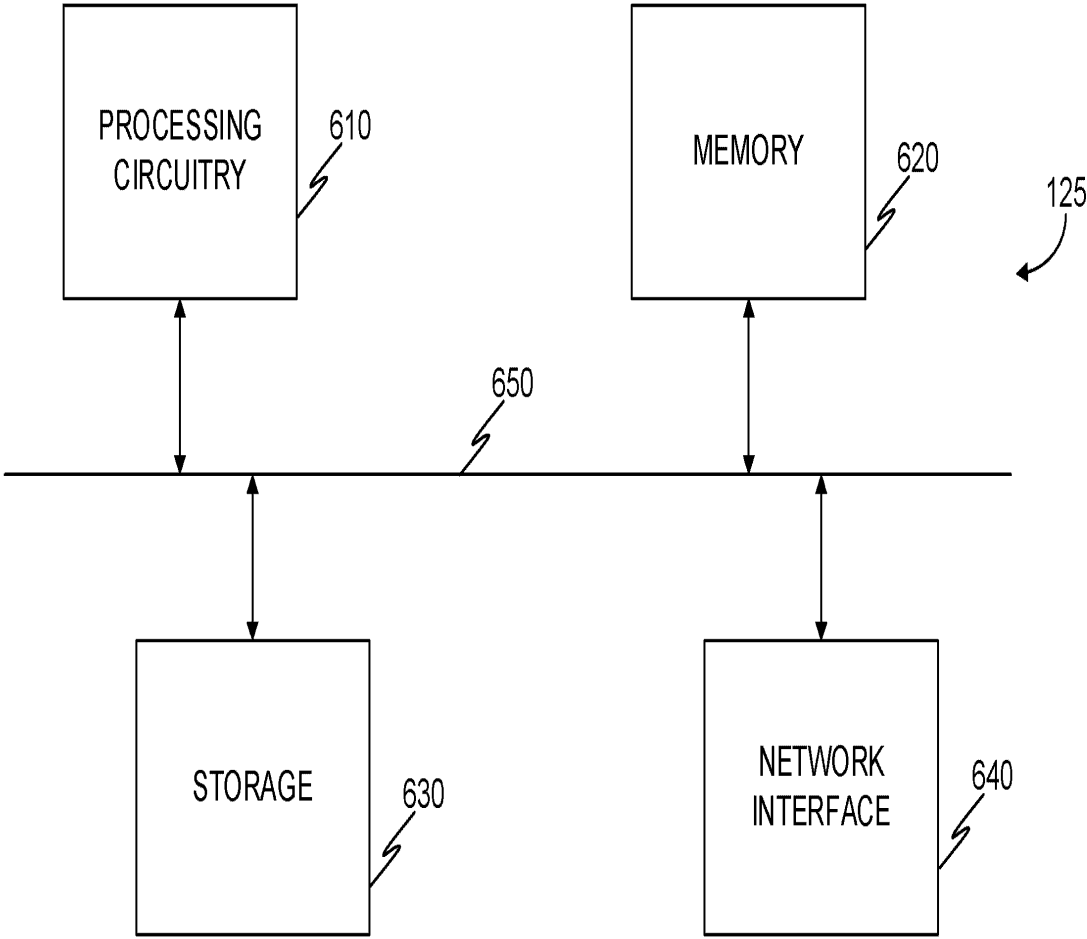


FIG. 6

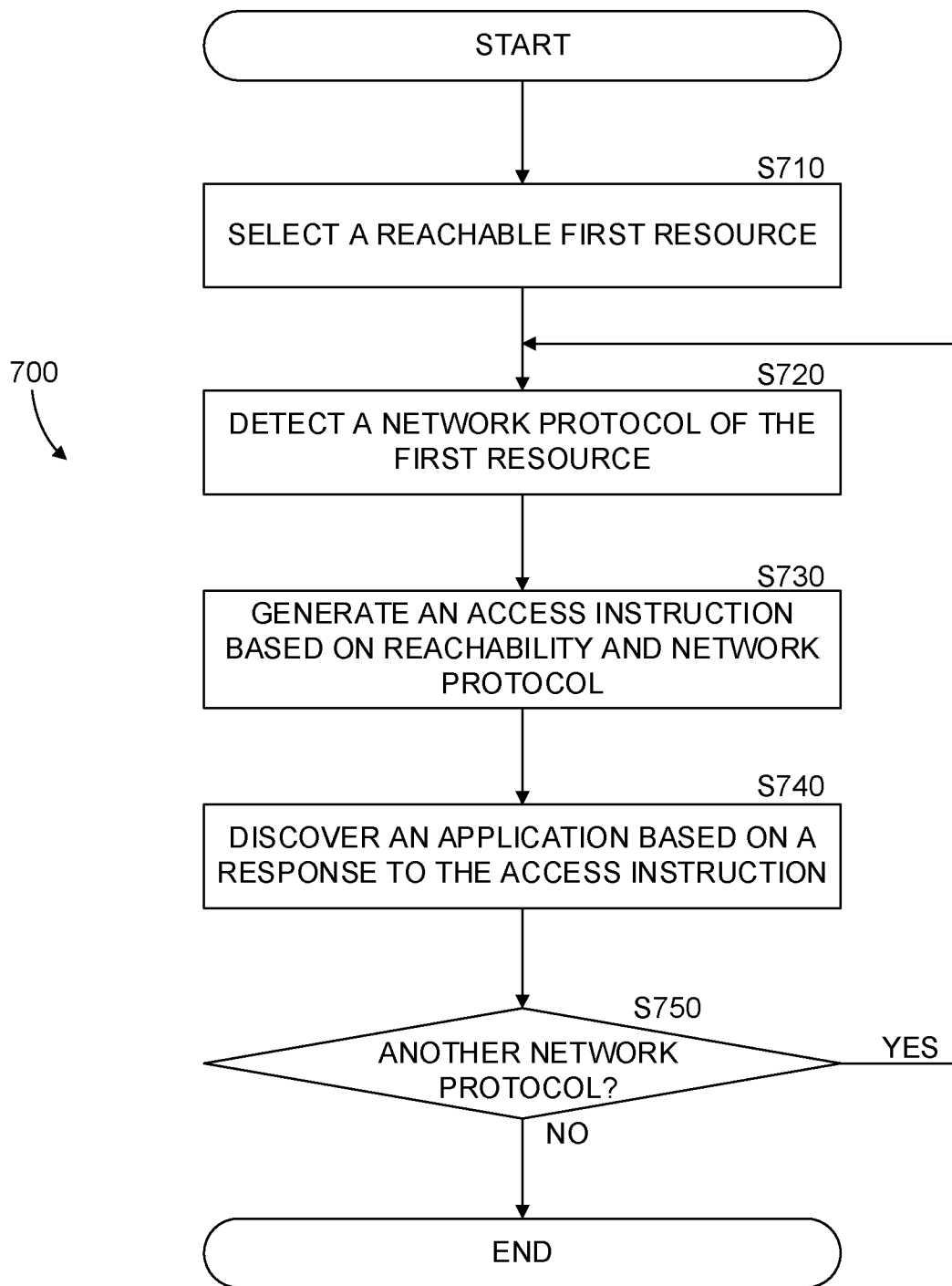


FIG. 7

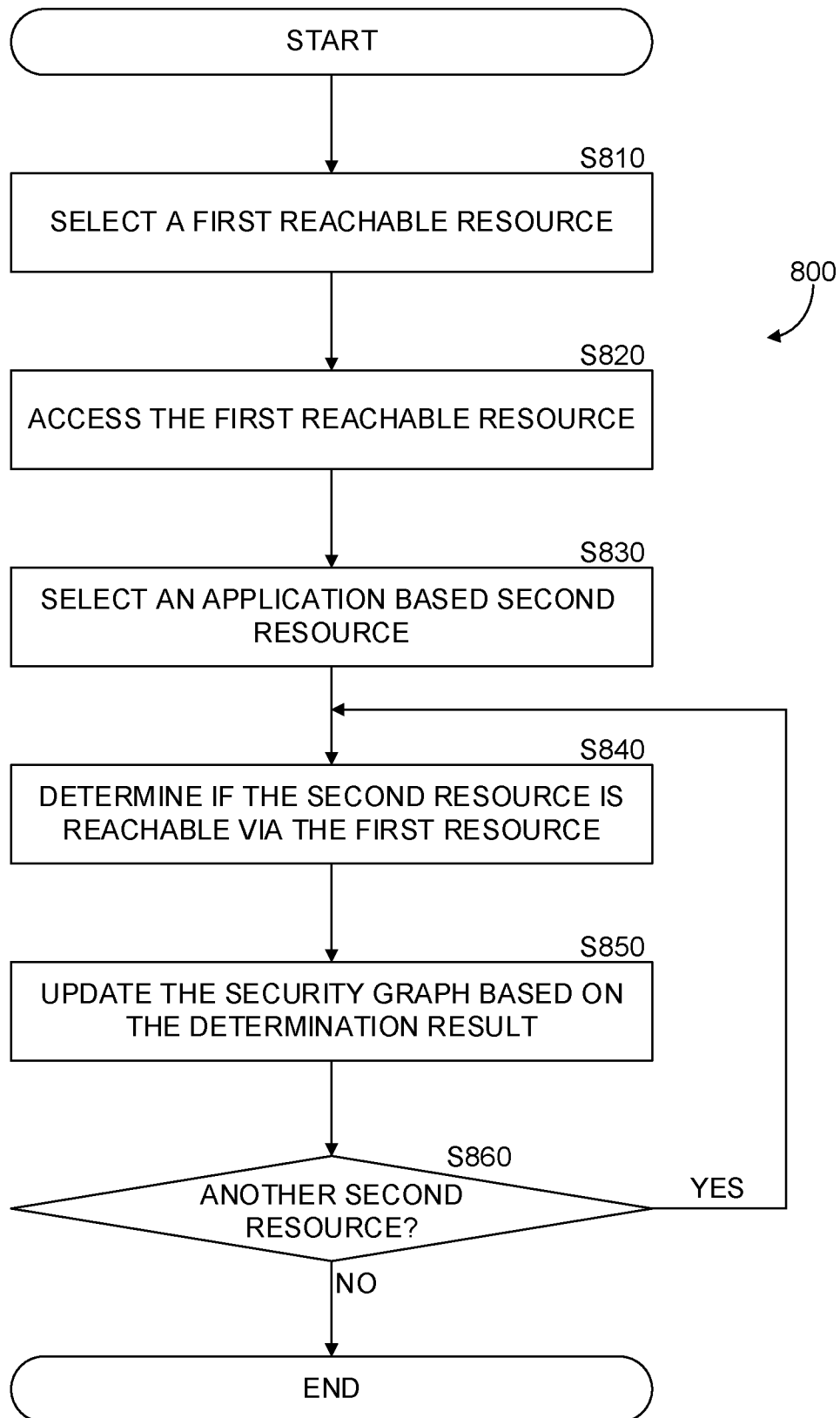


FIG. 8

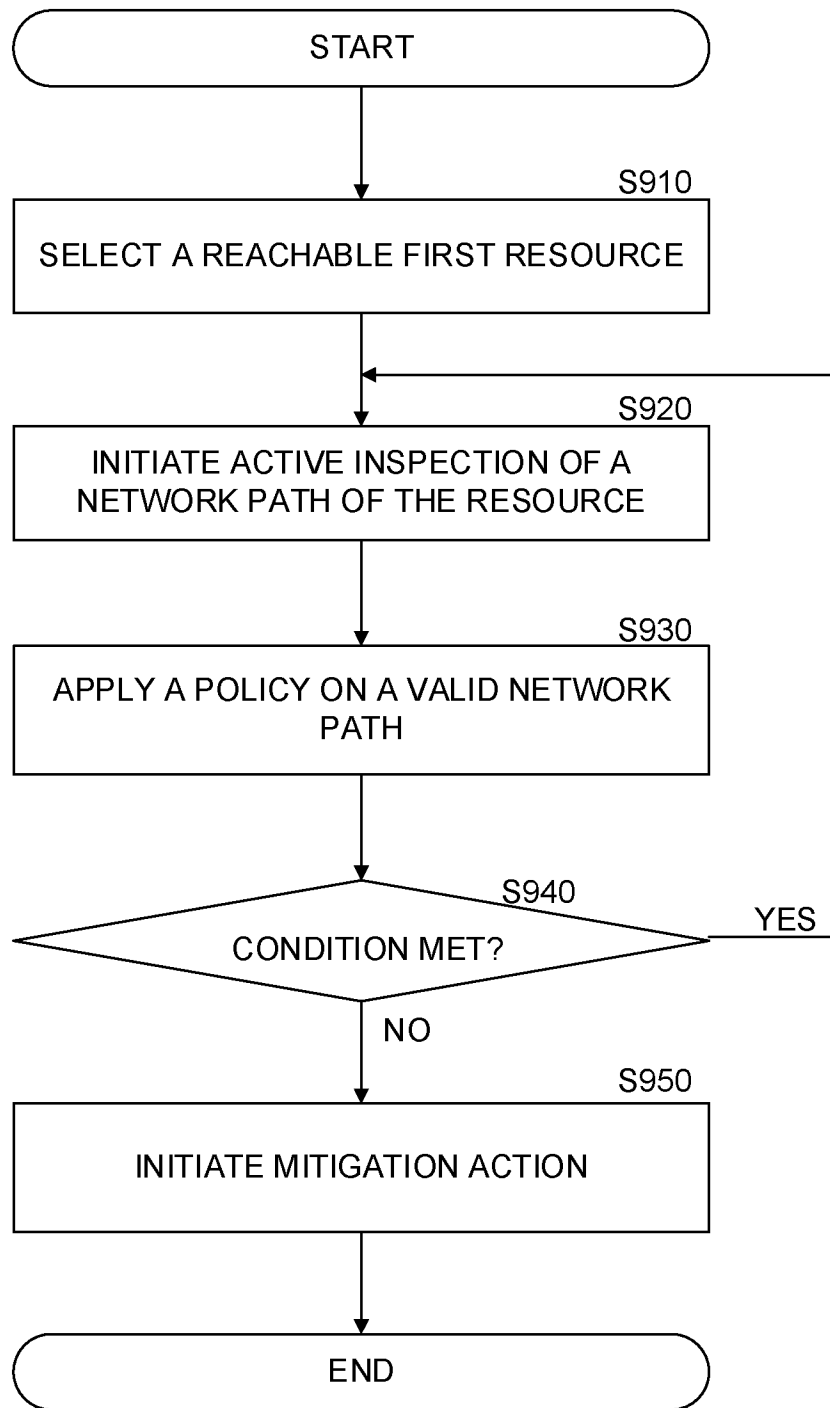


FIG. 9



ELECTRONIC PAYMENT RECEIPT

APPLICATION #
18/357,845

RECEIPT DATE / TIME
07/24/2023 06:19:15 PM ET

ATTORNEY DOCKET #
WZIO P2438

Title of Invention

SYSTEM AND METHOD FOR APPLYING A POLICY ON A NETWORK PATH

Application Information

APPLICATION TYPE Utility - Nonprovisional Application
under 35 USC 111(a)

PATENT # -

CONFIRMATION # 7484

FILED BY Alyce Kavanaugh

PATENT CENTER # 62488799

AUTHORIZED BY Michael Ben-Shimon

CUSTOMER # 122066

FILING DATE -

CORRESPONDENCE
ADDRESS -

FIRST NAMED
INVENTOR Roy REZNIK

Payment Information

PAYMENT METHOD
CARD / 3356

PAYMENT TRANSACTION ID
E20237NI21165143

PAYMENT AUTHORIZED BY
Alyce Kavanaugh

FEE CODE	DESCRIPTION	ITEM PRICE(\$)	QUANTITY	ITEM TOTAL(\$)
1830	PROCESSING FEE, EXCEPT IN PROVISIONAL APPLICATIONS	140.00	1	140.00
1817	REQUEST FOR PRIORITIZED EXAMINATION	4200.00	1	4200.00
1111	UTILITY PATENT APPL. SEARCH FEE	700.00	1	700.00
1011	BASIC FILING FEE - UTILITY (PAPER FILING ALSO REQUIRES NON- ELECTRONIC FILING FEE UNDER 1.16(T))	320.00	1	320.00
1311	PATENT APPL. EXAMINATION FEE	800.00	1	800.00

1202	EACH CLAIM IN EXCESS OF 20	100.00	1	100.00
TOTAL AMOUNT:				\$6,260.00

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New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.



ELECTRONIC ACKNOWLEDGEMENT RECEIPT

APPLICATION #
18/357,845

RECEIPT DATE / TIME
07/24/2023 06:19:15 PM ET

ATTORNEY DOCKET #
WZIO P2438

Title of Invention

SYSTEM AND METHOD FOR APPLYING A POLICY ON A NETWORK PATH

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APPLICATION TYPE Utility - Nonprovisional Application
under 35 USC 111(a)

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CONFIRMATION # 7484

FILED BY Alyce Kavanaugh

PATENT CENTER # 62488799

FILING DATE -

CUSTOMER # 122066

FIRST NAMED
INVENTOR Roy REZNIK

CORRESPONDENCE
ADDRESS -

AUTHORIZED BY Michael Ben-Shimon

Documents

TOTAL DOCUMENTS: 11

DOCUMENT	PAGES	DESCRIPTION	SIZE (KB)
WZIO_P2438_ads_20230713.pdf	10	Application Data Sheet	2224 KB
WZIO_P2438_spec_claims_drawings_20230712.pdf	51	-	288 KB
WZIO_P2438_spec_claims_drawings_20230712-SPEC.pdf (1-35)	35	Specification	212 KB
WZIO_P2438_spec_claims_drawings_20230712-CLM.pdf (36-40)	5	Claims	84 KB

WZIO_P2438_spec_claims__ drawings_20230712- ABST.pdf	(41-41)	1	Abstract	75 KB
WZIO_P2438_spec_claims__ drawings_20230712- DRW.pdf	(42-51)	10	Drawings-only black and white line drawings	128 KB
WZIO_P2438_Declaration_as signment_20230713.pdf		3	Oath or Declaration filed	619 KB
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WZIO_P2438_Authorization_t o_Charge_deposit_20230712 .pdf		1	Miscellaneous Incoming Letter	126 KB
WZIO_P2438_ids_20230713. pdf		4	Information Disclosure Statement (IDS) Form (SB08)	1252 KB
WZIO_P2438_track_one_for m_20230724.pdf		2	Track One Request	112 KB
WZIO_P2438_transmittal_20 230724.pdf		2	Transmittal of New Application	386 KB

Digest

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PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
 Stylesheet Version v1.2

EPAS ID: PAT8076189

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT
CONVEYING PARTY DATA	
Name	Execution Date
ROY REZNIK	07/20/2023
MATILDA LIDGI	07/16/2023
SHAI KEREN	07/13/2023
ELIRAN MAROM	07/14/2023
RECEIVING PARTY DATA	
Name:	WIZ, INC.
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State/Country:	NEW YORK
Postal Code:	10001
PROPERTY NUMBERS Total: 1	
Property Type	Number
Application Number:	18357845
CORRESPONDENCE DATA	
Fax Number:	(908)274-3113
<i>Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.</i>	
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Address Line 2:	SUITE 205
Address Line 4:	BERNARDSVILLE, NEW JERSEY 07924
ATTORNEY DOCKET NUMBER:	WZIO P2438
NAME OF SUBMITTER:	MICHAEL BEN-SHIMON
SIGNATURE:	/Michael Ben-Shimon/
DATE SIGNED:	07/25/2023
This document serves as an Oath/Declaration (37 CFR 1.63).	
Total Attachments: 3	

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DECLARATION AND ASSIGNMENT FOR PATENT APPLICATIONS

As a below named inventor (designated as “the undersigned”), I hereby declare that:

This assignment is directed to: ☐ The attached application, or
☒ United States Application or PCT International Application
Number 18/357,845 filed on 24 July 2023

The application is entitled:

SYSTEM AND METHOD FOR APPLYING A POLICY ON A NETWORK PATH

The above-identified application was made or authorized to be made by me.

I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.

I have reviewed and understand the contents of the above-identified application.

I acknowledge the duty to disclose information which is material to patentability as defined in Title 37, Code of Federal Regulations § 1.56, including for continuation-in-part applications, material information which became available between the filing date of the prior application and the national or PCT international filing date of the continuation-in-part application.

POWER OF ATTORNEY: I hereby appoint all practitioners of **M&B IP ANALYSTS, LLC** who are listed under the USPTO Customer Number shown below as my practitioners to prosecute this application and to transact all business in the United States Patent and Trademark Office connected therewith.

Address all correspondence to **CUSTOMER NUMBER 122066**.

The undersigned hereby acknowledges that any willful false statement made in this declaration is punishable under 18 U.S.C. §1001 by fine or imprisonment of not more than five (5) years, or both.

ASSIGNMENT

WHEREAS, **Wiz, Inc.** having an address at **One Manhattan West, 57th Floor, New York, NY, United States 10001** (hereinafter “ASSIGNEE”), is desirous of acquiring the entire right, title and interest in, to and under the above-identified application and invention, and to any Letters Patent(s) that may be granted therefor.

NOW, THEREFORE, for good and valuable consideration, the receipt of which is hereby acknowledged, the undersigned has sold, assigned, transferred and set over, and by these presents does hereby sell, assign, transfer and set over, unto the said ASSIGNEE, its successors, legal representatives and assigns, the entire right, title and interest in, to and under the said invention, and the said United States application and all divisions, renewals and continuations thereof, and all Patents of the United States which may be granted thereon and all reissues and extensions thereof; and all applications for industrial property protection, including, without limitation, all applications for patents, utility models, and designs which may hereafter be filed for said invention in any country or countries foreign to the United States, together with the right to file such applications and the right to claim for the same the priority rights derived from said United States application under the Patent Laws of the United States, the International Convention for the Protection of Industrial Property, or any other international agreement or the domestic laws of the country in which any such application is filed, as may be applicable; and all forms of industrial property protection, including, without limitation, patents, utility models, inventor's certificates and designs

DECLARATION AND ASSIGNMENT FOR PATENT APPLICATIONS

which may be granted for said invention in any country or countries foreign to the United States and all extensions, renewals and reissues thereof;

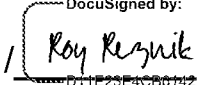
The undersigned authorizes and requests the Commissioner of Patents and Trademarks of the United States, and any Official of any country or countries foreign to the United States, whose duty it is to issue patents or other evidence or forms of industrial property protection on applications as aforesaid, to issue the same to the said ASSIGNEE, its successors, legal representatives and assigns, in accordance with the terms of this instrument.

The undersigned covenants and agrees that he has full right to convey the entire interest herein assigned, and has not executed, and will not execute, any agreement in conflict herewith.

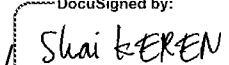
The undersigned further covenants and agrees that he will communicate to the said ASSIGNEE, its successors, legal representatives and assigns, any facts known respecting said invention, and testify in any legal proceeding, sign all lawful papers, execute all divisional, continuing, reissue and foreign applications, make all rightful oaths, and generally do everything possible to aid the said ASSIGNEE, its successors, legal representatives and assigns, to obtain and enforce proper protection for said invention in all countries.

The undersigned hereby grants the practitioners of **M&B IP Analysts, LLC** the power to insert any further identification which may be necessary or desirable in order to comply with the rules of the U.S. Patent and Trademark Office.

In witness whereof, executed by the undersigned on the date below the undersigned name.

Inventor's Printed Name in English:	Roy REZNIK
Inventor's Residence:	Tel Aviv, Israel
Inventor's Signature:	DocuSigned by:  B11E23E4C86442D...
Date:	7/20/2023

Inventor's Printed Name in English:	Matilda LIDGI
Inventor's Residence:	Tel Aviv, Israel
Inventor's Signature:	DocuSigned by:  2164CEAD76A4157...
Date:	7/16/2023

Inventor's Printed Name in English:	Shai KEREN
Inventor's Residence:	Tel Aviv, Israel
Inventor's Signature:	DocuSigned by:  6D65EAB1BA267AD...
Date:	7/13/2023

DECLARATION AND ASSIGNMENT FOR PATENT APPLICATIONS

Inventor's Printed Name in English:	Eliran MAROM
Inventor's Residence:	Yehud-Monoson, Israel
Inventor's Signature:	DocuSigned by:  7E210479538524B1...
Date:	7/14/2023



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APPLICATION NUMBER	FILING or 371(c) DATE	GRP ART UNIT	FIL FEE REC'D	ATTY. DOCKET NO	TOT CLAIMS	IND CLAIMS
18/357,845	07/24/2023		1920	WZIO P2438	21	3

CONFIRMATION NO. 7484

122066
M&B IP Analysts, LLC
150 Morristown Road
Suite 205
Bernardsville, NJ 07924-2626

FILING RECEIPT



0000000060447787

Date Mailed: 08/11/2023

Receipt is acknowledged of this non-provisional utility patent application. The application will be taken up for examination in due course. Applicant will be notified as to the results of the examination. Any correspondence concerning the application must include the following identification information: the U.S. APPLICATION NUMBER, FILING DATE, NAME OF FIRST INVENTOR, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection.

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Inventor(s)

Roy REZNIK, Tel Aviv, ISRAEL;
Matilda LIDGI, Tel Aviv, ISRAEL;
Shai KEREN, Tel Aviv, ISRAEL;
Eliran MAROM, Yehud-Monoson, ISRAEL;

Applicant(s)

Wiz, Inc., New York, NY;

Assignment For Published Patent Application

Wiz, Inc., New York, NY

Power of Attorney: None

Domestic Priority data as claimed by applicant

This application is a CIP of 17/818,898 08/10/2022
and is a CIP of 17/659,165 04/13/2022
and is a CIP of 17/659,163 04/13/2022
and is a CIP of 17/659,164 04/13/2022

Foreign Applications for which priority is claimed (You may be eligible to benefit from the **Patent Prosecution Highway** program at the USPTO. Please see <http://www.uspto.gov> for more information.) - None.

Foreign application information must be provided in an Application Data Sheet in order to constitute a claim to foreign priority. See 37 CFR 1.55 and 1.76.

Permission to Access Application via Priority Document Exchange: Yes

Permission to Access Search Results: Yes

Applicant may provide or rescind an authorization for access using Form PTO/SB/39 or Form PTO/SB/69 as appropriate.

If Required, Foreign Filing License Granted: 08/10/2023

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 18/357,845**

Projected Publication Date: 11/16/2023

Non-Publication Request: No

Early Publication Request: No

Title

SYSTEM AND METHOD FOR APPLYING A POLICY ON A NETWORK PATH

Preliminary Class

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications: No

PROTECTING YOUR INVENTION OUTSIDE THE UNITED STATES

Since the rights granted by a U.S. patent extend only throughout the territory of the United States and have no effect in a foreign country, an inventor who wishes patent protection in another country must apply for a patent in a specific country or in regional patent offices. Applicants may wish to consider the filing of an international application under the Patent Cooperation Treaty (PCT). An international (PCT) application generally has the same effect as a regular national patent application in each PCT-member country. The PCT process **simplifies** the filing of patent applications on the same invention in member countries, but **does not result** in a grant of "an international patent" and does not eliminate the need of applicants to file additional documents and fees in countries where patent protection is desired.

Almost every country has its own patent law, and a person desiring a patent in a particular country must make an application for patent in that country in accordance with its particular laws. Since the laws of many countries differ in various respects from the patent law of the United States, applicants are advised to seek guidance from specific foreign countries to ensure that patent rights are not lost prematurely.

Applicants also are advised that in the case of inventions made in the United States, the Director of the USPTO must issue a license before applicants can apply for a patent in a foreign country. The filing of a U.S. patent application serves as a request for a foreign filing license. The application's filing receipt contains further information and guidance as to the status of applicant's license for foreign filing.

Applicants may wish to consult the USPTO booklet, "General Information Concerning Patents" (specifically, the section entitled "Treaties and Foreign Patents") for more information on timeframes and deadlines for filing foreign patent applications. The guide is available either by contacting the USPTO Contact Center at 800-786-9199, or it can be viewed on the USPTO website at <http://www.uspto.gov/web/offices/pac/doc/general/index.html>.

For information on preventing theft of your intellectual property (patents, trademarks and copyrights), you may wish to consult the U.S. Government website, <http://www.stopfakes.gov>. Part of a Department of Commerce initiative,

page 2 of 4

this website includes self-help "toolkits" giving innovators guidance on how to protect intellectual property in specific countries such as China, Korea and Mexico. For questions regarding patent enforcement issues, applicants may call the U.S. Government hotline at 1-866-999-HALT (1-866-999-4258).

LICENSE FOR FOREIGN FILING UNDER
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Title 37, Code of Federal Regulations, 5.11 & 5.15

GRANTED

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NOT GRANTED

No license under 35 U.S.C. 184 has been granted at this time, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" DOES NOT appear on this form. Applicant may still petition for a license under 37 CFR 5.12, if a license is desired before the expiration of 6 months from the filing date of the application. If 6 months has lapsed from the filing date of this application and the licensee has not received any indication of a secrecy order under 35 U.S.C. 181, the licensee may foreign file the application pursuant to 37 CFR 5.15(b).

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PATENT APPLICATION FEE DETERMINATION RECORD

Substitute for Form PTO-875

Application or Docket Number
18/357,845

APPLICATION AS FILED - PART I

(Column 1)		(Column 2)	SMALL ENTITY		OR	OTHER THAN SMALL ENTITY	
FOR	NUMBER FILED	NUMBER EXTRA	RATE(\$)	FEE(\$)		RATE(\$)	FEE(\$)
BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A			N/A	320
SEARCH FEE (37 CFR 1.16(k), (l), or (m))	N/A	N/A	N/A			N/A	700
EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A			N/A	800
TOTAL CLAIMS (37 CFR 1.16(i))	21 minus 20 =	*			OR	x 100 =	100
INDEPENDENT CLAIMS (37 CFR 1.16(h))	3 minus 3 =	*				x =	0
APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$310 (\$155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).						0
MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))							0
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL			TOTAL	1820

APPLICATION AS AMENDED - PART II

(Column 1)		(Column 2)	(Column 3)	SMALL ENTITY		OR	OTHER THAN SMALL ENTITY	
AMENDMENT A	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE(\$)	ADDITIONAL FEE(\$)		RATE(\$)	ADDITIONAL FEE(\$)
Total (37 CFR 1.16(i))	*	Minus **	=	x	=	OR	x	=
Independent (37 CFR 1.16(h))	*	Minus ***	=	x	=	OR	x	=
Application Size Fee (37 CFR 1.16(s))						OR		
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))						OR		
				TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	

(Column 1)		(Column 2)	(Column 3)	SMALL ENTITY		OR	OTHER THAN SMALL ENTITY	
AMENDMENT B	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE(\$)	ADDITIONAL FEE(\$)		RATE(\$)	ADDITIONAL FEE(\$)
Total (37 CFR 1.16(i))	*	Minus **	=	x	=	OR	x	=
Independent (37 CFR 1.16(h))	*	Minus ***	=	x	=	OR	x	=
Application Size Fee (37 CFR 1.16(s))						OR		
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))						OR		
				TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.

** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".

*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".

The "Highest Number Previously Paid For" (Total or Independent) is the highest found in the appropriate box in column 1.



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www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
18/357,845	07/24/2023	Roy REZNIK	WZIO P2438	7484
122066	7590	08/30/2023	EXAMINER	
M&B IP Analysts, LLC 150 Morristown Road Suite 205 Bernardsville, NJ 07924-2626			ART UNIT	PAPER NUMBER
			NOTIFICATION DATE	DELIVERY MODE
			08/30/2023	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

eofficeaction@appcoll.com
pair@mb-ip.com

<i>Decision Granting Request for Prioritized Examination (Track I)</i>	Application No. 18/357,845	Applicant(s) REZNIK et al.	
	Examiner CHERYL P GIBSON BAYLOR	Art Unit OPET	AIA (FITF) Status Yes

1. THE REQUEST FILED 24 July 2023 IS **GRANTED** .

The above-identified application has met the requirements for prioritized examination

A. ☒ for an original nonprovisional application (Track I).

B. ☐ for an application undergoing continued examination (RCE).

2. **The above-identified application will undergo prioritized examination.** The application will be accorded special status throughout its entire course of prosecution until one of the following occurs:

A. filing a **petition for extension of time** to extend the time period for filing a reply;

B. filing an **amendment to amend the application to contain more than four independent claims, more than thirty total claims**, or a multiple dependent claim;

C. filing a **request for continued examination** ;

D. filing a notice of appeal;

E. filing a request for suspension of action;

F. mailing of a notice of allowance;

G. mailing of a final Office action;

H. completion of examination as defined in 37 CFR 41.102; or

I. abandonment of the application.

Telephone inquiries with regard to this decision should be directed to CHERYL GIBSON BAYLOR at (571)272-3213. In his/her absence, calls may be directed to Petition Help Desk at (571) 272-3282.

/CHERYL GIBSON BAYLOR/ Paralegal Specialist, OPET	
--	--

Notice of References Cited	Application/Control No. 18/357,845		Applicant(s)/Patent Under Reexamination REZNIK et al.	
	Examiner ANTHONY D BROWN		Art Unit 2433	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	CPC Classification	US Classification
*	A	US-20230136839-A1	05-2023	Sundararajan; Lakshmi Narasimhan	G06N20/00	711/154
*	B	US-20160140352-A1	05-2016	Nickolov; Alexander	H04W12/02	726/26
	C					
	D					
	E					
	F					
	G					
	H					
	I					
	J					
	K					
	L					
	M					

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	CPC Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

<i>Search Notes</i> 	Application/Control No. 18/357,845	Applicant(s)/Patent Under Reexamination REZNIK et al.
	Examiner ANTHONY D BROWN	Art Unit 2433

CPC - Searched*		
Symbol	Date	Examiner
H04L 63/20	10/14/2023	ADB

CPC Combination Sets - Searched*		
Symbol	Date	Examiner

US Classification - Searched*			
Class	Subclass	Date	Examiner
726	1	10/14/2023	ADB

* See search history printout included with this form or the SEARCH NOTES box below to determine the scope of the search.

Search Notes		
Search Notes	Date	Examiner
See Search History (PE2E)	10/14/2023	ADB
Double Patents/Inventor	10/14/2023	ADB
NPL Search/Google Patents	10/14/2023	ADB
US Class/CPC Class with search string	10/14/2023	ADB

Interference Search			
US Class/CPC Symbol	US Subclass/CPC Group	Date	Examiner

/ANTHONY D BROWN/ Primary Examiner, Art Unit 2433	
--	--

<i>Index of Claims</i> 	Application/Control No. 18/357,845	Applicant(s)/Patent Under Reexamination REZNIK et al.
	Examiner ANTHONY D BROWN	Art Unit 2433

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

CLAIMS										
☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47										
CLAIM		DATE								
Final	Original	10/14/2023								
	1	✓								
	2	✓								
	3	✓								
	4	✓								
	5	✓								
	6	✓								
	7	✓								
	8	✓								
	9	✓								
	10	✓								
	11	✓								
	12	✓								
	13	✓								
	14	✓								
	15	✓								
	16	✓								
	17	✓								
	18	✓								
	19	✓								
	20	✓								
	21	✓								

Bibliographic Data

Application No: 18/357,845

Foreign Priority claimed: ☐ Yes ☒ No

35 USC 119 (a-d) conditions met: ☐ Yes ☒ No ☐ Met After Allowance

Verified and Acknowledged: /ANTHONY D BROWN/

Examiner's Signature

Initials

Title:

SYSTEM AND METHOD FOR APPLYING A POLICY ON A NETWORK PATH

FILING or 371(c) DATE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.
07/24/2023	726	2433	WZIO P2438
RULE			

APPLICANTS

Wiz, Inc., New York, NY, UNITED STATES

INVENTORS

Roy REZNIK, Tel Aviv, ISRAEL

Matilda LIDGI, Tel Aviv, ISRAEL

Shai KEREN, Tel Aviv, ISRAEL

Eliran MAROM, Yehud-Monoson, ISRAEL

CONTINUING DATA

This application is a CIP of 17818898 08/10/2022

This application is a CIP of 17659163 04/13/2022

This application is a CIP of 17659164 04/13/2022

This application is a CIP of 17659165 04/13/2022

FOREIGN APPLICATIONS

IF REQUIRED, FOREIGN LICENSE GRANTED**

08/10/2023

STATE OR COUNTRY

ISRAEL

ADDRESS

M&B IP Analysts, LLC

150 Morristown Road

Suite 205

Bernardsville, NJ 07924-2626

UNITED STATES

FILING FEE RECEIVED

\$6,260

PE2E SEARCH - Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	British Equivalents	Time Stamp
L1	775	(network ADJ path) WITH policy	(US-PGPUB; USPAT)	OR	ON	ON	2023/10/16 10:33 AM
L2	13	(network ADJ path) WITH policy WITH external	(US-PGPUB; USPAT)	OR	ON	ON	2023/10/16 10:33 AM
L3	3	(network ADJ path) WITH policy WITH external SAME cloud	(US-PGPUB; USPAT)	OR	ON	ON	2023/10/16 10:38 AM
L4	6	(network ADJ path) WITH policy WITH external AND cloud	(US-PGPUB; USPAT)	OR	ON	ON	2023/10/16 10:38 AM
L5	2	(network ADJ path) WITH policy WITH external AND reachable	(US-PGPUB; USPAT)	OR	ON	ON	2023/10/16 10:49 AM
L6	69	(network ADJ path) WITH resource WITH cloud	(US-PGPUB; USPAT)	OR	ON	ON	2023/10/16 12:23 PM
L7	0	6 AND rule WITH ((another OR second OR different) ADJ (network ADJ path))	(US-PGPUB; USPAT)	OR	ON	ON	2023/10/16 12:25 PM
L8	38	rule WITH ((another OR second OR different) ADJ (network ADJ path))	(US-PGPUB; USPAT)	OR	ON	ON	2023/10/16 12:25 PM
L9	11	determin\$3 WITH rule WITH ((another OR second OR different) ADJ (network ADJ path))	(US-PGPUB; USPAT)	OR	ON	ON	2023/10/16 12:25 PM
L10	3	determin\$3 WITH rule WITH ((another OR second OR different) ADJ (network ADJ path)) AND cloud	(US-PGPUB; USPAT)	OR	ON	ON	2023/10/16 12:33 PM
L11	17	determin\$3 WITH (rule OR guidelines OR condition OR policy) WITH ((another OR second OR different) ADJ (network ADJ path)) AND cloud	(US-PGPUB; USPAT)	OR	ON	ON	2023/10/16 12:35 PM
L12	125	inspect\$3 WITH (network ADJ path)	(US-PGPUB; USPAT)	OR	ON	ON	2023/10/16 01:06 PM
L13	0	11 AND inspect\$3 WITH (network ADJ path)	(US-PGPUB; USPAT)	OR	ON	ON	2023/10/16 01:06 PM
L14	4	inspect\$3 WITH (network ADJ path)	(US-PGPUB; USPAT)	OR	ON	ON	2023/10/16 01:06 PM

L15	10	SAME cloud detect\$3 near3 (network ADJ path) SAME cloud	(US-PGPUB; USPAT)	OR	ON	ON	2023/10/16 01:06 PM
L16	0	inspect\$3 near3 (network ADJ path) SAME cloud	(US-PGPUB; USPAT)	OR	ON	ON	2023/10/16 01:07 PM
L17	20	monitor\$3 near3 (network ADJ path) SAME cloud	(US-PGPUB; USPAT)	OR	ON	ON	2023/10/16 01:07 PM
L18	3	17 AND resource WITH (network ADJ path)	(US-PGPUB; USPAT)	OR	ON	ON	2023/10/16 01:39 PM
L19	0	17 AND (cloud ADJ resource) WITH (network ADJ path)	(US-PGPUB; USPAT)	OR	ON	ON	2023/10/16 01:39 PM
L20	5	(cloud ADJ resource) WITH (network ADJ path)	(US-PGPUB; USPAT)	OR	ON	ON	2023/10/16 01:39 PM
L21	27285	(H04L63/20).cpc.	(US-PGPUB; USPAT)	OR	ON	ON	2023/10/17 01:23 PM
L22	7916	(726/1).ccls.	(US-PGPUB; USPAT)	OR	ON	ON	2023/10/17 01:24 PM
L23	2	21 AND determin\$3 WITH (rule OR guidelines OR condition OR policy) WITH ((another OR second OR different) ADJ (network ADJ path)) AND cloud	(US-PGPUB; USPAT)	OR	ON	ON	2023/10/17 01:24 PM
L24	0	22 AND determin\$3 WITH (rule OR guidelines OR condition OR policy) WITH ((another OR second OR different) ADJ (network ADJ path)) AND cloud	(US-PGPUB; USPAT)	OR	ON	ON	2023/10/17 01:24 PM
L25	0	21 AND determin\$3 WITH rule WITH ((another OR second OR different) ADJ (network ADJ path)) AND cloud	(US-PGPUB; USPAT)	OR	ON	ON	2023/10/17 01:25 PM
L26	0	22 AND determin\$3 WITH rule WITH ((another OR second OR different) ADJ (network ADJ path)) AND cloud	(US-PGPUB; USPAT)	OR	ON	ON	2023/10/17 01:25 PM
L28	50	21 AND (analyz\$3 OR examin\$4 OR inspect\$3) WITH (network ADJ path)	(US-PGPUB; USPAT)	OR	ON	ON	2023/10/17 01:26 PM

L29	5	22 AND (analyz\$3 OR examin\$4 OR inspect\$3) WITH (network ADJ path)	(US-PGPUB; USPAT)	OR	ON	ON	2023/10/17 01:26 PM
L30	7	21 AND rule WITH ((another OR second OR different) ADJ (network ADJ path))	(US-PGPUB; USPAT)	OR	ON	ON	2023/10/17 01:27 PM
L31	5	22 AND rule WITH ((another OR second OR different) ADJ (network ADJ path))	(US-PGPUB; USPAT)	OR	ON	ON	2023/10/17 01:27 PM

PE2E SEARCH - Search History (Interference)

There are no Interference searches to show.

Doc code: IDS

PTO/SB/08a (01-22)

Doc description: Information Disclosure Statement (IDS) Filed

Approved for use through 05/31/2024. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number			
	Filing Date			
	First Named Inventor	Roy REZNIK		
	Art Unit	2433		
	Examiner Name	A. Brown		
	Attorney Docket Number	WZIO P2438		

U.S.PATENTS							Remove
Examiner Initial*	Cite No	Patent Number	Kind Code ¹	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	
/A.D.B/	1	10574675	B2	2020-02-25	Peppe et al.	Entire Document	

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/A.D.B/	1	20200389469	A1	2020-12-10	Litichever et al.	Entire Document	

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**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**
(Not for submission under 37 CFR 1.99)

Application Number		
Filing Date		
First Named Inventor	Roy REZNIK	
Art Unit	2433	
Examiner Name	A. Brown	
Attorney Docket Number	WZIO P2438	

	1		☐
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Add**EXAMINER SIGNATURE**

Examiner Signature	/ANTHONY D BROWN/	Date Considered	10/14/2023
--------------------	-------------------	-----------------	------------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. ² Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). ³ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁴ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁵ Applicant is to place a check mark here if English language translation is attached.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Not for submission under 37 CFR 1.99)

Application Number		
Filing Date		
First Named Inventor	Roy REZNIK	
Art Unit	2433	
Examiner Name	A. Brown	
Attorney Docket Number	WZIO P2438	

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

☐ That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

☐ See attached certification statement.

☐ The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☒ A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Michael Ben-Shimon/	Date (YYYY-MM-DD)	2023-07-24
Name/Print	Michael Ben-Shimon	Registration Number	69610

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. **DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
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5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
18/357,845	07/24/2023	Roy REZNIK	WZIO P2438	7484
122066	7590	10/24/2023	EXAMINER	
M&B IP Analysts, LLC			BROWN, ANTHONY D	
150 Morristown Road			ART UNIT	PAPER NUMBER
Suite 205			2433	
Bernardsville, NJ 07924-2626			NOTIFICATION DATE	DELIVERY MODE
			10/24/2023	ELECTRONIC

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eofficeaction@appcoll.com
pair@mb-ip.com

Notice of Pre-AIA or AIA Status

The present application, filed on or after March 16, 2013, is being examined under the first inventor to file provisions of the AIA.

Information Disclosure Statement

The information disclosure statement (IDS) submitted on 7/24/2023 was filed after the mailing date of the application on 7/24/2023. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Claim Rejections - 35 USC § 103

In the event the determination of the status of the application as subject to AIA 35 U.S.C. 102 and 103 (or as subject to pre-AIA 35 U.S.C. 102 and 103) is incorrect, any correction of the statutory basis (i.e., changing from AIA to pre-AIA) for the rejection will not be considered a new ground of rejection if the prior art relied upon, and the rationale supporting the rejection, would be the same under either status.

The following is a quotation of 35 U.S.C. 103 which forms the basis for all obviousness rejections set forth in this Office action:

A patent for a claimed invention may not be obtained, notwithstanding that the claimed invention is not identically disclosed as set forth in section 102, if the differences between the claimed invention and the prior art are such that the claimed invention as a whole would have been obvious before the effective filing date of the claimed invention to a person having ordinary skill in the art to which the claimed invention pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claim(s) 1-21 are rejected under 35 U.S.C. 103 as being unpatentable over Sundararajan (US Patent Pub. 20230136839) in view of Nickolov (US Patent Pub. 20160140352).

As per claims 1 and 11-12: Sundararajan discloses a method for applying a policy on a network path, comprising:

selecting a reachable resource having a network path to access the reachable resource, wherein the reachable resource is a cloud object deployed in a cloud computing environment, having access to an external network which is external to the cloud computing environment (**Paragraph 114; The cloud services provider 302 depicted in FIG. 3A may be embodied, for example, as a system and computing environment that provides a vast array of services to users of the cloud services provider 302 through the sharing of computing resources via the data communications link 304**);

initiating a mitigation action, in response to determining that the conditional rule is not met; and applying the policy on another network path, in response to determining that the conditional rule is met (**claim 1; determining one or more conditions associated with a plurality of network paths to the storage resource, where the plurality of network paths includes a first network path through a storage area network and a second network path through a container system communication network; and routing, based on the one or more conditions, the storage operation to the storage resource using the first network path**).

However, Sundararajan do not specifically disclose actively inspecting the network path to determine if the network path of the reachable resource is accessible from the external network (**See Nickolov; Paragraph 72; determine whether there is permission to send the highly confidential data stream over the external network portion 24**);

applying a policy on the accessible network path (**See Nickolov; Paragraph 72; determine whether the imposed policies consider an open Internet connection to be a highly confidential link or not**), wherein the policy includes a conditional rule (**Paragraph 72; operation can be controlled by establishing and imposing one or more policies, rules, etc.**).

Therefore, it would have been obvious before the effective filing date of the claimed invention to a person having ordinary skill in the art to which the claimed invention pertains, having the teachings of Sundararajan and Nickolov in it's entirety, to modify the technique of Sundararajan for determining one or more conditions associated with a plurality of network paths by adopting Nickolov's teaching for if the highly confidential communications pathway is not an in-network path, determine whether there is permission to send the highly confidential data stream over the external. The motivation would have been to applying a policy on a network path.

As per claims 2 and 13: The method of claim 1, further comprising: initiating active inspection for each network path of a plurality of network paths; storing an indicator to indicate that a first network path of the plurality of network paths is a valid path, in response to determining that the reachable resource is accessible from the external network: and applying the policy on the first network path (**claim 1; determining one or**

more conditions associated with a plurality of network paths to the storage resource, where the plurality of network paths includes a first network path through a storage area network and a second network path through a container system communication network; and routing, based on the one or more conditions, the storage operation to the storage resource using the first network path).

As per claims 3 and 14: The method of claim 2, further comprising: initiating active inspection by generating an access instruction for the reachable resource; and executing the access instruction on a network path (**Paragraph 72; operation can be controlled by establishing and imposing one or more policies, rules, etc.).**

As per claims 4 and 15: The method of claim 2, further comprising:
applying the policy only on each network path of the plurality of network paths which is a valid path (**See Nickolov; Paragraph 72; determine whether the imposed policies consider an open Internet connection to be a highly confidential link or not).**

As per claims 5 and 16: The method of claim 4, further comprising: initiating active inspection on each network path of the plurality of network paths to determine if the network path is a valid network path (**claim 1; determining one or more conditions associated with a plurality of network paths to the storage resource, where the plurality of network paths includes a first network path through a storage area network and a second network path through a container system communication network; and routing, based on the one or**

more conditions, the storage operation to the storage resource using the first network path).

As per claims 6 and 17: The method of claim 1, further comprising: initiating the mitigation action on the reachable resource (**Paragraph 72; operation can be controlled by establishing and imposing one or more policies, rules, etc.**).

As per claims 7 and 18: The method of claim 6, wherein the mitigation action includes any one of: revoking access to the reachable resource, revoking access from the reachable resource, closing a port of the reachable resource, generating a notification, generating an alert, and any combination thereof (**See Nickolov; Paragraph 73; the highly confidential data remains blocked from transmission until an in-network path becomes available**).

As per claims 8 and 19: The method of claim 1, further comprising: generating an exception to the policy based on a valid network path (**See Nickolov; Paragraph 72; determine whether the imposed policies consider an open Internet connection to be a highly confidential link or not**).

As per claims 9 and 20: The method of claim 1, further comprising: initiating active inspection of the network path to detect an application path (**claim 1; determining one or more conditions associated with a plurality of network paths to the storage resource, where the plurality of network paths includes a first network path through a storage area network and a second network path through a container system communication network; and routing, based on the one or more conditions, the storage operation to the storage resource using the first network path**).

As per claims 10 and 21: The method of claim 9, further comprising: generating the mitigation action further based on the application path (**claim 1; determining one or more conditions associated with a plurality of network paths to the storage resource, where the plurality of network paths includes a first network path through a storage area network and a second network path through a container system communication network; and routing, based on the one or more conditions, the storage operation to the storage resource using the first network path**)..

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANTHONY D BROWN whose telephone number is (571)270-1472. The examiner can normally be reached 730-330pm.

Examiner interviews are available via telephone, in-person, and video conferencing using a USPTO supplied web-based collaboration tool. To schedule an interview, applicant is encouraged to use the USPTO Automated Interview Request (AIR) at <http://www.uspto.gov/interviewpractice>.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey Pwu can be reached on 571-272-6798. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Art Unit: 2433

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/ANTHONY D BROWN/
Primary Examiner, Art Unit 2433



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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
18/357,845	07/24/2023	Roy REZNIK	WZIO P2438

CONFIRMATION NO. 7484

122066
M&B IP Analysts, LLC
150 Morristown Road
Suite 205
Bernardsville, NJ 07924-2626

PUBLICATION NOTICE



OC00000064642556

Date Mailed: 11/16/2023

Title:SYSTEM AND METHOD FOR APPLYING A POLICY ON A NETWORK PATH

Publication No.US-2023-0370499-A1

Publication Date:11/16/2023

NOTICE OF PUBLICATION OF APPLICATION

The above-identified application will be electronically published as a patent application publication pursuant to 37 CFR 1.211, et seq. The patent application publication number and publication date are set forth above.

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The publication process established by the Office does not provide for mailing a copy of the publication to applicant. A copy of the publication may be obtained from the Office upon payment of the appropriate fee set forth in 37 CFR 1.19(a)(1). Orders for copies of patent application publications are handled by the USPTO's Public Records Division. The Public Records Division can be reached by telephone at (571) 272-3150 or (800) 972-6382, by facsimile at (571) 273-3250, by mail addressed to the United States Patent and Trademark Office, Public Records Division, Alexandria, VA 22313-1450 or via the Internet.

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
18/357,845	07/24/2023	Roy REZNIK	WZIO P2438	7484
122066	7590	11/24/2023	EXAMINER	
M&B IP Analysts, LLC			BROWN, ANTHONY D	
150 Morristown Road			ART UNIT	PAPER NUMBER
Suite 205			2433	
Bernardsville, NJ 07924-2626			NOTIFICATION DATE	DELIVERY MODE
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eofficeaction@appcoll.com
pair@mb-ip.com

<i>Applicant-Initiated Interview Summary</i>	Application No. 18/357,845	Applicant(s) REZNIK et al.		
	Examiner ANTHONY D BROWN	Art Unit 2433	AIA (First Inventor to File) Status Yes	Page 1 of 1

All Participants (applicant, applicants representative, PTO personnel)	Title	Type
ANTHONY D BROWN	Primary Examiner	Telephonic
Ophir Marko	Attorney of Record	
Michael Ben-Shimon	Attorney	

Date of Interview: 14 November 2023

Issues Discussed:

35 U.S.C. 102

Examiner and Applicant's representative discussed the scope of the invention. Applicant's representative discussed the claim limitations of dependent claim 2 which recite "storing an indicator to indicate that a first network path of the plurality of network paths is a valid path, in response to determining that the reachable resource is accessible from the external network". Examiner agreed to review prior art and update search.

/ANTHONY D BROWN/ Primary Examiner, Art Unit 2433	
Applicant is reminded that a complete written statement as to the substance of the interview must be made of record in the application file. It is the applicants responsibility to provide the written statement, unless the interview was initiated by the Examiner and the Examiner has indicated that a written summary will be provided. See MPEP 713.04 Please further see: MPEP 713.04 Title 37 Code of Federal Regulations (CFR) § 1.133 Interviews, paragraph (b) 37 CFR § 1.2 Business to be transacted in writing	

Applicant recordation instructions: The formal written reply to the last Office action must include the substance of the interview. (See MPEP section 713.04). If a reply to the last Office action has already been filed, applicant is given a non-extendable period of the longer of one month or thirty days from this interview date, or the mailing date of this interview summary form, whichever is later, to file a statement of the substance of the interview.

Examiner recordation instructions: Examiners must summarize the substance of any interview of record. A complete and proper recordation of the substance of an interview should include the items listed in MPEP 713.04 for complete and proper recordation including the identification of the general thrust of each argument or issue discussed, a general indication of any other pertinent matters discussed regarding patentability and the general results or outcome of the interview, to include an indication as to whether or not agreement was reached on the issues raised.

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PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875	Application or Docket Number 18/357,845	Filing Date 07/24/2023	☐ To be Mailed
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ENTITY: ☒ LARGE ☐ SMALL ☐ MICRO

APPLICATION AS FILED - PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA	RATE (\$)	FEE (\$)
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A	
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A	
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 =	*	x \$100 =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*	x \$480 =	
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$310 (\$155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).			
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))				
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL	

APPLICATION AS AMENDED - PART II

	(Column 1)		(Column 2)	(Column 3)	RATE (\$)	ADDITIONAL FEE (\$)
AMENDMENT	12/07/2023		CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	
	Total (37 CFR 1.16(i))	*	21	Minus	** 21	= 0
	Independent (37 CFR 1.16(h))	*	3	Minus	*** 3	= 0
	☐ Application Size Fee (37 CFR 1.16(s))					
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))					
TOTAL ADD'L FEE						0
AMENDMENT			CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	
	Total (37 CFR 1.16(i))	*		Minus	**	=
	Independent (37 CFR 1.16(h))	*		Minus	***	=
	☐ Application Size Fee (37 CFR 1.16(s))					
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))					
TOTAL ADD'L FEE						
* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.						LIE
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".						/DONNA D SMALLS LOGAN/
*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".						
The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.						

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APPLICATION #
18/357,845

RECEIPT DATE / TIME
12/07/2023 04:56:12 PM Z ET

ATTORNEY DOCKET #
WZIO P2438

Title of Invention

SYSTEM AND METHOD FOR APPLYING A POLICY ON A NETWORK PATH

Application Information

APPLICATION TYPE Utility - Nonprovisional Application
under 35 USC 111(a)

PATENT # -

CONFIRMATION # 7484

FILED BY Sydney Manning

PATENT CENTER # 63532267

FILING DATE 07/24/2023

CUSTOMER # 122066

FIRST NAMED
INVENTOR Roy REZNIK

CORRESPONDENCE
ADDRESS -

AUTHORIZED BY Michael Ben-Shimon

Documents

TOTAL DOCUMENTS: 4

DOCUMENT	PAGES	DESCRIPTION	SIZE (KB)
WZIO_P2438_resp_nfoa_20231207.pdf	13	-	132 KB
WZIO_P2438_resp_nfoa_20231207-A....pdf	(1-1) 1	Amendment/Request for Reconsideration-After Non-Final Rejection	80 KB
WZIO_P2438_resp_nfoa_20231207-INTRVIEW.APP.pdf	(2-2) 1	Applicant summary of interview with examiner	79 KB
WZIO_P2438_resp_nfoa_20231207-CLM.pdf	(3-8) 6	Claims	91 KB

WZIO_P2438_resp_nfoa_2 0231207-REM.pdf	(9-13)	5	Applicant Arguments/Remarks Made in an Amendment	110 KB
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Digest

DOCUMENT	MESSAGE DIGEST(SHA-512)
WZIO_P2438_resp_nfoa_2023 1207.pdf	AFF6F3296AF00EC2D0B4B6A157C8A01F59FBFD7D01CDB810 E89A97B8B43E8120716C1B5C02A9180AC71EDBD68A6AE7D98 CF982A28DA5D57765682D77007F3831
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WZIO_P2438_resp_nfoa_2023 1207-REM.pdf	571640B7CBCAB43B36C4A622194C9A246A16D1B8541045C03 DEF97BD5371E2981D50823328B038E4F3309C960C2899A5DFF E6C8F45A0FE152C3BC1380CF03862

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New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

First Named Inventor: Roy Reznik
Serial No: 18/357,845
Filed: July 24, 2023
Docket No.: WZIO P2438
Examiner: Brown, Anthony D
Art Unit: 2433
Confirmation No.: 7484

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

AMENDMENT UNDER 37 C.F.R. §1.111

Sir:

Responsive to the Non-Final Office Action dated **October 24, 2023**, the following remarks are hereby submitted. Reconsideration of the application is respectfully requested.

Interview Summary begins on page **2** of this paper.

Amendments to the claims begin on page **3** of this paper.

Remarks begin on page **9** of this paper.

INTERVIEW SUMMARY

Applicant thanks Examiner Brown for the courtesy extended to Applicant's representatives Mr. Michael Ben-Shimon and Mr. Ophir Marko on their telephonic interview on **November 14, 2023**. During the interview Examiner indicated that the limitation of dependent claim 2 appears to overcome the cited art, pending further search.

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

1. (Currently Amended) A method for applying a policy on a network path, comprising:

selecting a reachable resource having a network path to access the reachable resource, wherein the reachable resource is a cloud object deployed in a cloud computing environment, having access to an external network which is external to the cloud computing environment;

actively inspecting the network path to determine if the network path of the reachable resource is accessible from the external network;

storing an indicator to indicate that the network path is a valid path, in response to determining that the reachable resource is accessible from the external network;

applying a policy on the ~~accessible network~~ valid path, wherein the policy includes a conditional rule;

initiating a mitigation action, in response to determining that the conditional rule is not met; and

applying the policy on another network path, in response to determining that the conditional rule is met.

2. (Currently Amended) The method of claim 1, further comprising:

initiating active inspection for each network path of a plurality of network paths;

~~storing an indicator to indicate that a first network path of the plurality of network paths is a valid path, in response to determining that the reachable resource is accessible from the external network; and~~

applying the policy only on the first a network path of the plurality of network paths which is a valid path.

3. (Original) The method of claim 2, further comprising:

initiating active inspection by generating an access instruction for the reachable resource; and

executing the access instruction on a network path.

4. (Original) The method of claim 2, further comprising:
applying the policy only on each network path of the plurality of network paths which is a valid path.
5. (Original) The method of claim 4, further comprising:
initiating active inspection on each network path of the plurality of network paths to determine if the network path is a valid network path.
6. (Original) The method of claim 1, further comprising:
initiating the mitigation action on the reachable resource.
7. (Original) The method of claim 6, wherein the mitigation action includes any one of: revoking access to the reachable resource, revoking access from the reachable resource, closing a port of the reachable resource, generating a notification, generating an alert, and any combination thereof.
8. (Original) The method of claim 1, further comprising:
generating an exception to the policy based on a valid network path.
9. (Original) The method of claim 1, further comprising:
initiating active inspection of the network path to detect an application path.
10. (Original) The method of claim 9, further comprising:
generating the mitigation action further based on the application path.

11. (Currently Amended) A non-transitory computer-readable medium storing a set of instructions for applying a policy on a network path, the set of instructions comprising:

one or more instructions that, when executed by one or more processors of a device, cause the device to:

select a reachable resource having a network path to access the reachable resource, wherein the reachable resource is a cloud object deployed in a cloud computing environment, having access to an external network which is external to the cloud computing environment;

actively inspect the network path to determine if the network path of the reachable resource is accessible from the external network;

storing an indicator to indicate that the network path is a valid path, in response to determining that the reachable resource is accessible from the external network;

apply a policy on the ~~accessible network~~ valid path, wherein the policy includes a conditional rule;

initiate a mitigation action, in response to determining that the conditional rule is not met; and

apply the policy on another network path, in response to determining that the conditional rule is met.

12. (Currently Amended) A system for applying a policy on a network path comprising:

a processing circuitry; and

a memory, the memory containing instructions that, when executed by the processing circuitry, configure the system to:

select a reachable resource having a network path to access the reachable resource, wherein the reachable resource is a cloud object deployed in a cloud computing environment, having access to an external network which is external to the cloud computing environment;

actively inspect the network path to determine if the network path of the reachable resource is accessible from the external network;

store an indicator to indicate that the network path is a valid path, in response to determining that the reachable resource is accessible from the external network;

apply a policy on the ~~accessible network~~ valid path, wherein the policy includes a conditional rule;

initiate a mitigation action, in response to determining that the conditional rule is not met; and

apply the policy on another network path, in response to determining that the conditional rule is met.

13. (Currently Amended) The system of claim 12, wherein the memory contains further instructions which when executed by the processing circuitry further configure the system to:

initiate active inspection for each network path of a plurality of network paths;

~~store an indicator to indicate that a first network path of the plurality of network paths is a valid path, in response to determining that the reachable resource is accessible from the external network; and~~

apply the policy only on the first a network path of the plurality of network paths which is a valid path.

14. (Original) The system of claim 13, wherein the memory contains further instructions which when executed by the processing circuitry further configure the system to:

initiate active inspection by generating an access instruction for the reachable resource; and

execute the access instruction on a network path.

15. (Original) The system of claim 13, wherein the memory contains further instructions which when executed by the processing circuitry further configure the system to:

apply the policy only on each network path of the plurality of network paths which is a valid path.

16. (Original) The system of claim 15, wherein the memory contains further instructions which when executed by the processing circuitry further configure the system to:

initiate active inspection on each network path of the plurality of network paths to determine if the network path is a valid network path.

17. (Original) The system of claim 12, wherein the memory contains further instructions which when executed by the processing circuitry further configure the system to:

initiate the mitigation action on the reachable resource.

18. (Original) The system of claim 17, wherein the mitigation action includes any one of:

revoking access to the reachable resource, revoking access from the reachable resource, closing a port of the reachable resource, generating a notification, generating an alert, and any combination thereof.

19. (Original) The system of claim 12, wherein the memory contains further instructions which when executed by the processing circuitry further configure the system to:

generate an exception to the policy based on a valid network path.

20. (Original) The system of claim 12, wherein the memory contains further instructions which when executed by the processing circuitry further configure the system to:

initiate active inspection of the network path to detect an application path.

21. (Original) The system of claim 20, wherein the memory contains further instructions which when executed by the processing circuitry further configure the system to:

generate the mitigation action further based on the application path.

REMARKS

Claims 1-21 are pending, and claims 1-21 are rejected under 35 U.S.C. §103.

By the foregoing amendments, various claims have been amended. The amendments to the claims are proper and justified and are supported by the specification and claims as originally filed. The amendments to the already pending claims have been made for reasons of form and not to avoid prior art. No new matter has been added.

Rejections of Claims Under 35 U.S.C. §103

Claims 1-21 stand rejected under 35 U.S.C. §103 as allegedly being unpatentable over Sundararajan, US Patent Pub. 20230136839, in view of Nickolov, US Patent Pub. 20160140352 (hereinafter "Nickolov"). This ground of rejection is respectfully traversed for the following reasons.

Claim 1, as amended, requires (emphasis added):

storing an indicator to indicate that the network path is a valid path, in response to determining that the reachable resource is accessible from the external network;
applying a policy on the accessible network valid path, wherein the policy includes a conditional rule;
initiating a mitigation action, in response to determining that the conditional rule is not met; and
applying the policy on another network path, in response to determining that the conditional rule is met.

The cited art of Sundararajan in view of Nickolov does not disclose at least storing an indicator to indicate that a network path is a valid network path, as required by the claim. For this claim element, the Office Action cites claim 1 of Sundararajan. However, Sundararajan does not so teach.

Sundararajan teaches (emphasis added):

The containerized storage system may intelligently select a network path, from among the plurality of network paths, for routing one or more storage operations (e.g., from the containerized application to the storage resource) based on conditions in the container system, such as network

conditions of the plurality of network paths. (Sundararajan, par. [0255])

Sundararajan goes on to explain what is meant by network path conditions (emphasis added):

In some embodiments, the conditions of the container system 400 may include network conditions of the storage area network 502 and/or the local area network 504, such as latencies, throughput or data flow, etc. of the networks and/or network paths. In some embodiments, the conditions of the container system may include configuration settings of the container system 400, containerized applications in the container system 400, and/or containerized storage system 402. For example, a configuration setting such as a defined number of replicas of a virtual volume may be considered by the storage path routing module 500 to select a storage path for a storage operation related to the virtual volume. (Sundararajan, par. [0288])

Sundararajan therefore teaches that routing to a storage is performed over a network by selecting a network path based on conditions which include conditions of the network, such as latency, throughput, etc. However, this has **nothing** to do with indicating that a network path is valid. Sundararajan does **not** teach or suggest that a network path is valid or not valid, and at best states that one network path may be preferable over another network path.

Turning now to the additional claim elements, for the element of “selecting a reachable resource having a network path to access the reachable resource”, the Office Action cites par. 114 and Fig. 3A of Sundararajan. However, Fig. 3A of Sundararajan teaches the **opposite** of the claim. The instant claim requires that the reachable resource is deployed in the cloud computing environment, of which the alleged analog of Sundararajan is the Cloud Services Provider 302. By contrast to the instant claim, the storage system 306 of Fig. 3A of Sundararajan is external to the cloud computing environment. Therefore, the computer architecture of Sundararajan is entirely different than what is called for in the claim.

For the element of “initiating a mitigation action”, the Office Action again cites claim 1 of Sundararajan. However, Sundararajan does **not** so teach. Initially, Sundararajan does **not** teach that a mitigation action is initiated in response to a conditional rule not

being met. There is **no** mitigation action in Sundararajan at all, as Sundararajan is directed to storage and **not** to cybersecurity. There is **nothing** for Sundararajan to mitigate, as such. As further explained above, the conditions of Sundararajan are **not** conditional rules as required by the claim, but rather are metrics of a network path, such as latency. Nickolov is not cited as curing any of the above deficiencies.

The Office Action admits that Sundararajan does not disclose active inspection of a network path. For this claim element, the Office Action cites Nickolov. However, Nickolov does **not** so teach.

Nickolov teaches (emphases added):

...the client devices 30 determine whether there is **permission to send** the highly confidential data stream over the external network portion 24 (Nickolov, par. [0072])

Nickolov at best teaches that a client device is configured to determine whether it is allowed to send a content over a network. Nickolov does **not** teach that active inspection of a network path is performed, as defined in the specification in at least par. [0029], [0040]-[0043], [0050]-[0064], and [0098]-[0109]. This has **nothing** to do with permission for sending a content over an external network portion.

Therefore, Nickolov does **not** teach active inspection of a network to determine if the network path of a reachable resource is accessible from an external network, as required by the claim.

For the claim element of “applying the policy on a valid network path”, the Office Action also cites par. [0072] of Nickolov. As Applicant explained above, Nickolov does **not** so teach. Nickolov does **not** apply a policy on a network path, and certainly **not** on a valid network path, as required by the claim. At best, Nickolov teaches that confidential data should not be sent on an external network portion. This is **not** applying a policy on a network path, this is a policy which is applied on the data. Sundararajan is not cited as curing the deficiencies noted above.

In light of the above and as mentioned by the Examiner during the interview summary, it is believed that Claim 1 is allowable given the cited art.

Claims 11 and 12 are rejected using the same rationale as claim 1, accordingly Applicant applies the same arguments, *mutatis mutandis*, with respect to claims 11 and 12, which are likewise allowable. Claims 2-10 depend from claim 1, and claims 13-21

depend from claim 12. Accordingly, these claims are allowable at least for being dependent on an otherwise allowable claim.

Withdrawal of this rejection is respectfully solicited.

CONCLUSION

Having fully addressed the Office Action's rejections it is believed that, in view of the preceding remarks, this application stands in condition for allowance. Accordingly, reconsideration and allowance are respectfully solicited. If, however, the Examiner is of the opinion that such action cannot be taken, the Examiner is invited to contact the Applicants' representative at (908) 274-3111, so that a mutually convenient date and time for a telephonic interview may be scheduled.

Any fee due this paper may be charged to, or overpayment credited to, deposit account **50-6438**.

Respectfully submitted,
M&B IP Analysts, LLC

/Michael Ben-Shimon/
Michael Ben-Shimon
Reg. No.: 69,610

Mail all correspondence to:
CUSTOMER NO.: 122066

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		18357845
	Filing Date		2023-07-24
	First Named Inventor	Roy REZNIK	
	Art Unit	2433	
	Examiner Name	Anthony D BROWN	
	Attorney Docket Number	WZIO P2438	

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	2	20170034198	A1	2017-12-05	Powers et al.	Entire Document
	3	20180004950	A1	2018-01-04	Gupta et al.	Entire Document
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		18357845
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	Art Unit	2433	
	Examiner Name	Anthony D BROWN	
	Attorney Docket Number	WZIO P2438	

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	1	International Search Report of PCT/IB2023/058074, dated 20 November 2023. Searching Authority United States Patent and Trademark Office, Alexandria, Virginia.	☐
	2	Written Opinion of the Searching Authority of PCT/IB2023/058074, dated 20 November 2023. Searching Authority United States Patent and Trademark Office, Alexandria, Virginia.	☐

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Examiner Signature		Date Considered	
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*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. ² Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). ³ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁴ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁵ Applicant is to place a check mark here if English language translation is attached.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		18357845
	Filing Date		2023-07-24
	First Named Inventor	Roy REZNIK	
	Art Unit	2433	
	Examiner Name	Anthony D BROWN	
	Attorney Docket Number	WZIO P2438	

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

☒ That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

☒ See attached certification statement.

☐ The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☐ A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Michael Ben-Shimon/	Date (YYYY-MM-DD)	2024-01-10
Name/Print	Michael Ben-Shimon	Registration Number	69610

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. **DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
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9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.



ELECTRONIC ACKNOWLEDGEMENT RECEIPT

APPLICATION #
18/357,845

RECEIPT DATE / TIME
01/10/2024 03:46:26 PM Z ET

ATTORNEY DOCKET #
WZIO P2438

Title of Invention

SYSTEM AND METHOD FOR APPLYING A POLICY ON A NETWORK PATH

Application Information

APPLICATION TYPE Utility - Nonprovisional Application
under 35 USC 111(a)

PATENT # -

CONFIRMATION # 7484

FILED BY Sydney Manning

PATENT CENTER # 63901717

FILING DATE 07/24/2023

CUSTOMER # 122066

FIRST NAMED
INVENTOR Roy REZNIK

CORRESPONDENCE
ADDRESS -

AUTHORIZED BY Michael Ben-Shimon

Documents

TOTAL DOCUMENTS: 3

DOCUMENT	PAGES	DESCRIPTION	SIZE (KB)
WZIO_P2438_npl_ISR_2023 1120.pdf	2	Non Patent Literature	93 KB
WZIO_P2438_npl_wosa_202 31120.pdf	6	Non Patent Literature	435 KB
WZIO_P2438_ids_20240110. pdf	4	Information Disclosure Statement (IDS) Form (SB08)	1252 KB

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WZIO_P2438_npl_ISR_20231120.pdf	3A4E181C3C5AB43BE865FB5BA5A8F11CF09CDC6697ABA4EF2335223B3BF7F3D0E6A2D501FB0B66EE420B825DFC73C45550C8ED166E42909441D85272D3F460C1
WZIO_P2438_npl_wosa_20231120.pdf	6C29F635C1FD8BA8D3070FBDF5D3A0DB8CB861D0AB1599F01E4F20B3BE149B279E7C17CA6A1DB35675F682B3BFAF8DF3A3F417057442183BFD592499CE48D283
WZIO_P2438_ids_20240110.pdf	D492D6AC11B9E7629F7E06DDB0F1F0EA6834B42422C04A133679EA82EC46D5DEB35DE6F97089F91191137E7716CF6B8DE11675FCB279FDF48BA5014D3961C4CB

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If a new application is being filed and the application includes the necessary components for filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

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If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference WZIO-P2246PCT		FOR FURTHER ACTION see Form PCT/ISA/220 as well as, where applicable, item 5 below.	
International application No. PCT/IB2023/058074	International filing date (day/month/year) 09 August 2023	(Earliest) Priority Date (day/month/year) 10 August 2022	
Applicant WIZ, INC.			

This international search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of 2 sheets.

☐ It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

a. With regard to the **language**, the international search was carried out on the basis of:

☒ the international application in the language in which it was filed.

☐ a translation of the international application into _____, which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).

b. ☐ This international search report has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43.6bis(a)).

c. ☐ With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, see Box No. I.

2. ☐ **Certain claims were found unsearchable** (see Box No. II).

3. ☐ **Unity of invention is lacking** (see Box No. III).

4. With regard to the **title**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2, by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regard to the **drawings**,

a. the figure of the **drawings** to be published with the abstract is Figure No. _____

☐ as suggested by the applicant.

☐ as selected by this Authority, because the applicant failed to suggest a figure.

☐ as selected by this Authority, because this figure better characterizes the invention.

b. ☒ none of the figures is to be published with the abstract.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/IB2023/058074

A. CLASSIFICATION OF SUBJECT MATTER IPC(8) - INV. - G06F 21/55; H04L 41/046 (2023.01) ADD. - H04L 67/10 (2023.01) CPC - INV. - G06F 21/554; H04L 41/046 (2023.08) ADD. - H04L 67/10 (2023.08) According to International Patent Classification (IPC) or to both national classification and IPC		
B. FIELDS SEARCHED Minimum documentation searched (classification system followed by classification symbols) See Search History document Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched See Search History document Electronic database consulted during the international search (name of database and, where practicable, search terms used) See Search History document		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2021/0105304 A1 (EXPANSE INC.) 08 April 2021 (08.04.2021) entire document	1-19
A	US 2017/0034198 A1 (ARCHITECTURE TECHNOLOGY CORPORATION) 02 February 2017 (02.02.2017) entire document	1-19
A	US 2016/0366185 A1 (TELEPUTERS LLC) 15 December 2016 (15.12.2016) entire document	1-19
A	US 2018/0004950 A1 (VIRSEC SYSTEMS INC.) 04 January 2018 (04.01.2018) entire document	1-19
☐ Further documents are listed in the continuation of Box C. ☐ See patent family annex.		
* Special categories of cited documents: "A" document defining the general state of the art which is not considered to be of particular relevance "D" document cited by the applicant in the international application "E" earlier application or patent but published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means "P" document published prior to the international filing date but later than the priority date claimed "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art "&" document member of the same patent family		
Date of the actual completion of the international search 12 October 2023		Date of mailing of the international search report NOV 20 2023
Name and mailing address of the ISA/ Mail Stop PCT, Attn: ISA/US, Commissioner for Patents P.O. Box 1450, Alexandria, VA 22313-1450 Facsimile No. 571-273-8300		Authorized officer Taina Matos Telephone No. PCT Helpdesk: 571-272-4300

Form PCT/ISA/210 (second sheet) (July 2022)

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

To: MICHAEL BEN-SHIMON
M&B IP ANALYSTS, LLC
150 MORRISTOWN ROAD
SUITE 205
BERNARDSVILLE, NJ 07924
US

Date of mailing
(day/month/year)

NOV 20 2023

Applicant's or agent's file reference
WZIO-P2246PCT

FOR FURTHER ACTION

See paragraph 2 below

International application No.

PCT/IB2023/058074

International filing date (day/month/year)

09 August 2023

Priority date (day/month/year)

10 August 2022

International Patent Classification (IPC) or both national classification and IPC

IPC(8) - INV. - G06F 21/55; H04L 41/046 (2023.01)

ADD. - H04L 67/10 (2023.01)

CPC - INV. - G06F 21/554; H04L 41/046 (2023.08)

ADD. - H04L 67/10 (2023.08)

Applicant WIZ, INC.

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step and industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

Name and mailing address of the ISA/
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Commissioner for Patents
P.O. Box 1450, Alexandria, VA 22313-1450
Facsimile No. 571-273-8300

Date of completion of this opinion

12 October 2023

Authorized officer

Taina Matos

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Form PCT/ISA/237 (cover sheet) (July 2022)

IPR2025-01085

Orca Security EX1002 Page 143

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.

PCT/IB2023/058074

Box No. I Basis of this opinion

1. With regard to the **language**, this opinion has been established on the basis of:

- ☒ the international application in the language in which it was filed.
☐ a translation of the international application into _____ which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).

2. ☐ This opinion has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43*bis*.1(b)).

3. ☐ With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, this opinion has been established on the basis of a sequence listing:

- a. ☐ forming part of the international application as filed.
b. ☐ furnished subsequent to the international filing date for the purposes of international search (Rule 13*ter*.1(a)),
☐ accompanied by a statement to the effect that the sequence listing does not go beyond the disclosure in the international application as filed.

4. ☐ With regard to any nucleotide and/or amino acid sequence disclosed in the international application, this opinion has been established to the extent that a meaningful opinion could be formed without a WIPO Standard ST.26 compliant sequence listing.

5. Additional comments:

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.

PCT/IB2023/058074

Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step and industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	5, 15	YES
	Claims	1-4, 6-14, 16-19	NO
Inventive step (IS)	Claims	None	YES
	Claims	1-19	NO
Industrial applicability (IA)	Claims	1-19	YES
	Claims	None	NO

2. Citations and explanations:

Claims 1-4, 6-14, and 16-19 lack novelty under PCT Article 33(2) as being anticipated by US 2021/0105304 to Expanse Inc..

Regarding Claim 1, Expanse Inc. discloses a method for technology stack discovery by performing active inspection (network mapping system 204 is a system for scanning a network in order to map the network and discover network assets; Fig. 2; [0084]) of a cloud computing environment (the example networked computing environment depicted in FIG. 2 includes a network 200 over which various network-connected computing systems are capable of communicating; Fig. 2; [0082]; the networked computing environment depicted in FIG. 2 can also include an entity network 220; Fig. 2; [0087]), comprising: select a reachable resource (the network mapping system 204 can perform network mapping and/or asset discovery accessing one or more network systems; Fig. 2; [0087]), having a network path to access the reachable resource (network systems 206, 208, 210, 212, 214, and/or 216 and network mapping system 204 which are communicatively coupled to external network 200; Fig. 2; [0083-0084]), wherein the reachable resource is a cloud object deployed in the cloud computing environment (each network system of FIG. 2, such as network system 206, 208, etc., may represent a network-connected device or system, or any other type of computing device capable of communicating over the network 200; Fig. 2; [0085]), and accessible from a network which is external to the cloud computing environment (the network mapping system 204 can perform network mapping and/or asset discovery by scanning a network that is external to entity 220 such as network 200; Fig. 2; [0087]); determine a network protocol for the network path (communication between network-connected computing systems over network 200 may be over any known communication protocol; Fig. 2; [0082]); and actively inspect the network path (example process 600 beings at step 602 with scanning a set of addresses associated with a computer network and at step 604 receiving responses based on the scanning; Fig. 6; [0122]; example process 600 is executed by network mapping system 204 of FIG. 2; Fig. 6; [0121]) to determine if an application utilizing the network protocol is deployed on the reachable resource as part of a technology stack of the reachable resource (one or more services may be implemented using the network asset identified at step 606, thus the step of identifying the network asset may include a sub-step of identifying a service that is implemented using the network asset; Fig. 6; [0129]; the steps of example process 600 shown in FIG. 6 are executed by the network mapping system 204 of FIG. 2; Fig. 6; [0121]; the network asset identified at step 606 can be a network system shown in FIG. 2; Fig. 6; [0123]).

Regarding Claim 2, Expanse Inc. discloses the method of claim 1, further comprising: generating an access instruction (network mapping system 204 includes a processor and memory with instructions for scanning data; Fig. 2; [0084]), wherein the access instruction when executed configures a computing device to send an instruction to the reachable resource over the network path (instructions for scanning data associated with various systems can be executed by network mapping system 204, in response to a command from the administrator system 202; scanning data may include transmitting, via network 200, some type of payload data to one or more network systems; Fig. 2; [0084]), causing the reachable resource to send a response (scanning data can include receiving a response from the one or more network systems sent in response to a payload data received; Fig. 2; [0084]).

Regarding Claim 3, Expanse Inc. discloses the method of claim 2, further comprising: determining that the application is deployed in response to receiving a response from the reachable resource (FIG. 6 is an example process for network asset discovery executed by network mapping system 204 of FIG. 2; Fig. 6; [0121]; information indicating the presence of a service, such as a service identifier, may be included in a response received at step 604; Fig. 6; [0129]) corresponding to the network protocol (the network mapping system 204 may provide a payload to all accessible networks systems on all accessible ports and determine whether responses are received from one or more of the accessible network systems; Fig. 6; [0123]); and determining that the application is not deployed in response to receiving an error response from the reachable resource (Network system 300 is a network system of FIG. 2, such as network system 206, 208, 210, 212, 214, and/or 216, which includes a network interface 306 that is configured for communication with network 200; Fig. 3; [0090-0093]. Network interface 306 includes network communications information 308; Fig. 3; [0093]. Network communications information 308 includes text information associated with a service or set of services, for example a connection refused text or a service not supported text; Fig. 3; [0094]. This text information can be sent in response to a payload received; Fig. 6; [0124]).

Regarding Claim 4, Expanse Inc. discloses the method of claim 1, wherein the network protocol is hypertext transfer protocol (HTTP) (some ports of a network system 300 are associated with one or more specific communication services, for example, HTTP, FTP, SSH; Fig. 3; [0094]; network system 300 is a network system of FIG. 2, such as network system 206, 208, 210, 212, 214, and/or 216; Fig. 3; [0090]).

Supplemental Box

In case the space in any of the preceding boxes is not sufficient.
Continuation of:

Regarding Claim 6, Expanse Inc. discloses the method of claim 1, further comprising: querying a security graph to detect an open port of the reachable resource (the fingerprint database 410 may store fingerprints for identifying network systems; fingerprints may include communications information settings such as a set of open ports; Fig. 4; [0099]); FIG. 4 illustrates a network mapping system 400 which is the network mapping system 204 of FIG. 2; Fig. 4; [0095]), wherein the security graph represents the cloud computing environment (the fingerprints stored in the fingerprint database 410 can be utilized by the networking mapping system 300 as matching criteria for identifying network components that are associated with a client network; Fig. 4; [0099]).

Regarding Claim 7, Expanse Inc. discloses the method of claim 6, wherein the open port is associated with the network protocol and another network protocol (some ports are associated with one or more specific communications services such as HTTP, FTP, SSH, etc.; Fig. 3; [0094]; FIG. 3 illustrates a network system 300 which is a network system of FIG. 2, such as network system 206, 208, 210, 212, 214, and/or 216; Fig. 3; [0090]).

Regarding Claim 8, Expanse Inc. discloses the method of claim 7, further comprising: generating a first access instruction based on the network path and the network protocol; and generating a second access instruction based on the network path and the another network protocol. (Step 522 explains that an indication to scan comprises an indication of a set of ports at each address to scan, and that the set of ports comprises one or more ports determined to be associated with a service of interest; Fig. 5B; [0113]. In order to scan a particular address for a variety of ports/services a first instruction to a specific address specifying a particular port and a second instruction to the same address specifying a different port, would need to be generated. Step 524 explains that a response will be requested by transmitting one or more payloads to a set of addresses on a set of ports; Fig. 5B; [0114]. Fig. 5B illustrates an example process 500b executed by networking mapping system 204 of Fig. 2; Fig. 5B; [0112]).

Regarding Claim 9, Expanse Inc. discloses the method of claim 8, further comprising: actively inspecting the network path by executing the second access instruction, in response to receiving an error from the reachable resource in response to executing the first access instruction (Step 524 explains that a first payload may be sent to a particular port on a particular address; Fig. 5B; [0114]; step 526 explains that a response to a first payload is received; Fig. [0115]; at step 530 it is determined whether there is a follow-up probe associated with the response; the decision regarding a follow up probe can be made based on any of the response data from the initial probe, including whether there is a particular service associated with address and/or port; Fig. 5B; [0117-0118]. A response indicating that a particular service is not associated with a particular address and/or port can be considered an error. Step 532 explains that the follow-up probe associated with the response is executed and that executing the follow-up probe may include transmitting a follow-up pay and determining other addresses or ports to probe; Fig. 5B; [0019]. Thus, a follow-up probe can be sent that utilizes different addresses or ports, in response to receiving a response resulting from the transmittal of a first probe).

Regarding Claim 10, Expanse Inc. discloses a non-transitory computer readable medium having stored thereon instructions for causing a processing circuitry to execute a process (network mapping system 204 includes a memory and a processor, the memory including instructions for scanning data associated with various network systems, and the processor executing said instructions for scanning data; Fig. 2; [0084]), the process comprising: selecting a reachable resource (the network mapping system 204 can perform network mapping and/or asset discovery accessing one or more network systems; Fig. 2; [0087]), having a network path to access the reachable resource (network systems 206, 208, 210, 212, 214, and/or 216 and network mapping system 204 are communicatively coupled to external network 200; Fig. 2; [0083-0084]), wherein the reachable resource is a cloud object deployed in the cloud computing environment (each network system of FIG. 2, such as network system 206, 208, etc., may represent a network-connected device or system, or any other type of computing device capable of communicating over the network 200; Fig. 2; [0085]), and accessible from a network which is external to the cloud computing environment (the network mapping system 204 can perform network mapping and/or asset discovery by scanning a network that is external to entity 220 such as network 200; Fig. 2; [0087]); determining a network protocol for the network path (communication between network-connected computing systems over network 200 may be over any known communication protocol; Fig. 2; [0082]); and actively inspecting the network path (example process 600 beings at step 602 with scanning a set of addresses associated with a computer network and at step 604 receiving responses based on the scanning; Fig. 6; [0122]; example process 600 is executed by network mapping system 204 of FIG. 2; Fig. 6; [0121]) to determine if an application utilizing the network protocol is deployed on the reachable resource as part of a technology stack of the reachable resource (one or more services may be implemented using the network asset identified at step 606, thus the step of identifying the network asset may include a sub-step of identifying a service that is implemented using the network asset; Fig. 6; [0129]; the steps of example process 600 shown in FIG. 6 are executed by the network mapping system 204 of FIG. 2; Fig. 6; [0121]).

Regarding Claim 11, Expanse Inc. discloses a system for performing active inspection of a cloud computing environment, comprising: a processing circuitry; and a memory, the memory containing instructions that, when executed by the processing circuitry (network mapping system 204 includes a memory and a processor, the memory including instructions for scanning data associated with various network systems, and the processor executing said instructions for scanning data; Fig. 2; [0084]), configure the system to: select a reachable resource (the network mapping system 204 can perform network mapping and/or asset discovery accessing one or more network systems; Fig. 2; [0087]), having a network path to access the reachable resource (network systems 206, 208, 210, 212, 214, and/or 216 and network mapping system 204 are communicatively coupled to external network 200; Fig. 2; [0083-0084]), wherein the reachable resource is a cloud object deployed in the cloud computing environment (each network system of FIG. 2, such as network system 206, 208, etc., may represent a network-connected device or system, or any other type of computing device capable of communicating over the network 200; Fig. 2; [0085]), and accessible from a network which is external to the cloud computing environment (the network mapping system 204 can perform network mapping and/or asset discovery by scanning a network that is external to entity 220 such as network 200; Fig. 2; [0087]); determining a network protocol for the network path (communication between network-connected computing systems over network 200 may be over any known communication protocol; Fig. 2; [0082]); and actively inspecting the network path (example process 600 beings at step 602 with scanning a set of addresses associated with a computer network and at step 604 receiving responses based on the scanning; Fig. 6; [0122]; example process 600 is executed by network mapping system 204 of FIG. 2; Fig. 6; [0121]) to determine if an application utilizing the network protocol is deployed on the reachable resource as part of a technology stack of the reachable resource (one or more services may be implemented using the network asset identified at step 606, thus the step of identifying the network asset may include a sub-step of identifying a service that is implemented using the network asset; Fig. 6; [0129]; the steps of example process 600 shown in FIG. 6 are executed by the network mapping system 204 of FIG. 2; Fig. 6; [0121]).

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.

PCT/IB2023/058074

Supplemental Box

In case the space in any of the preceding boxes is not sufficient.

Continuation of:

Regarding Claim 12, Expanse Inc. discloses the system of claim 10, wherein the memory contains further instructions that, when executed by the processing circuitry, (network mapping system 204 includes a memory and a processor, the memory including instructions for scanning data associated with various network systems, and the processor executing said instructions for scanning data; Fig. 2; [0084]), further configure the system to: generate an access instruction (network mapping system 204 includes a processor and memory with instructions for scanning data; Fig. 2; [0084]), wherein the access instruction when executed configures a computing device to send an instruction to the reachable resource over the network path (instructions for scanning data associated with various systems can be executed in response to a command from the administrator system 202; scanning data may include transmitting, via network 200, some type of payload data to one or more network systems; Fig. 2; [0084]), causing the reachable resource to send a response (scanning data can include receiving a response from the one or more network systems sent in response to a payload data received; Fig. 2; [0084]).

Regarding Claim 13, Expanse Inc. discloses the system of claim 12, wherein the memory contains further instructions that, when executed by the processing circuitry (network mapping system 204 includes a memory and a processor, the memory including instructions for scanning data associated with various network systems, and the processor executing said instructions for scanning data; Fig. 2; [0084]), further configure the system to: determine that the application is deployed in response to receiving a response from the reachable resource (FIG. 6 is an example process for network asset discovery executed by network mapping system 204 of FIG. 2; Fig. 6; [0121]; information indicating the presence of a service, such as a service identifier, may be included in a response received at step 604; Fig. 6; [0129]) corresponding to the network protocol (the network mapping system 204 may provide a payload to all accessible networks systems on all accessible ports and determine whether responses are received from one or more of the accessible network systems; Fig. 6; [0123]); and determine that the application is not deployed in response to receiving an error response from the reachable resource (Network system 300 is a network system of FIG. 2, such as network system 206, 208, 210, 212, 214, and/or 216, which includes a network interface 306 that is configured for communication with network 200; Fig. 3; [0090-0093]. Network interface 306 includes network communications information 308; Fig. 3; [0093]. Network communications information 308 includes text information associated with a service or set of services, for example a connection refused text or a service not supported text; Fig. 3; [0094]. This text information can be sent in response to a payload received; Fig. 6; [0124]).

Regarding Claim 14, Expanse Inc. discloses the system of claim 10, wherein the network protocol is hypertext transfer protocol (HTTP) (some ports of a network system 300 are associated with one or more specific communication services, for example, HTTP, FTP, SSH; Fig. 3; [0094]; network system 300 is a network system of FIG. 2, such as network system 206, 208, 210, 212, 214, and/or 216; Fig. 3; [0090]).

Regarding Claim 16, Expanse Inc. discloses the system of claim 10, wherein the memory contains further instructions that, when executed by the processing circuitry (network mapping system 204 includes a memory and a processor, the memory including instructions for scanning data associated with various network systems, and the processor executing said instructions for scanning data; Fig. 2; [0084]), further configure the system to: query a security graph to detect an open port of the reachable resource (the fingerprint database 410 may store fingerprints for identifying network systems; fingerprints may include communications information settings such as a set of open ports; Fig. 4; [0099]; FIG. 4 illustrates a network mapping system 400 which is the network mapping system 204 of FIG. 2; Fig. 4; [0095]), wherein the security graph represents the cloud computing environment (the fingerprints stored in the fingerprint database 410 can be utilized by the networking mapping system 300 as matching criteria for identifying network components that are associated with a client network; Fig. 4; [0099]).

Regarding Claim 17, Expanse Inc. discloses the system of claim 16, wherein the open port is associated with the network protocol and another network protocol (some ports are associated with one or more specific communications services such as HTTP, FTP, SSH, etc.; Fig. 3; [0094]; FIG. 3 illustrates a network system 300 which is a network system of FIG. 2, such as network system 206, 208, 210, 212, 214, and/or 216; Fig. 3; [0090]).

Regarding Claim 18, Expanse Inc. discloses the system of claim 17, wherein the memory contains further instructions that, when executed by the processing circuitry (network mapping system 204 includes a memory and a processor, the memory including instructions for scanning data associated with various network systems, and the processor executing said instructions for scanning data; Fig. 2; [0084]), further configure the system to: generate a first access instruction based on the network path and the network protocol; and generate a second access instruction based on the network path and the another network protocol. (Step 522 explains that an indication to scan comprises an indication of a set of ports at each address to scan, and that the set of ports comprises one or more ports determined to be associated with a service of interest; Fig. 5B; [0113]. In order to scan a particular address for a variety of ports/services a first instruction to a specific address specifying a particular port and a second instruction to the same address specifying a different port, would need to be generated. Step 524 explains that a response will be requested by transmitting one or more payloads to a set of addresses on a set of ports; Fig. 5B; [0114]. Fig. 5B illustrates an example process 500b executed by networking mapping system 204 of Fig. 2; Fig. 5B; [0112]).

Regarding Claim 19, Expanse Inc. discloses the system of claim 18, wherein the memory contains further instructions that, when executed by the processing circuitry (network mapping system 204 includes a memory and a processor, the memory including instructions for scanning data associated with various network systems, and the processor executing said instructions for scanning data; Fig. 2; [0084]), further configure the system to: actively inspect the network path by executing the second access instruction, in response to receiving an error from the reachable resource in response to executing the first access instruction (Step 524 explains that a first payload may be sent to a particular port on a particular address; Fig. 5B; [0114]; step 526 explains that a response to a first payload is received; Fig. [0115]; at step 530 it is determined whether there is a follow-up probe associated with the response; the decision regarding a follow up probe can be made based on any of the response data from the initial probe, including whether there is a particular service associated with address and/or port; Fig. 5B; [0117-0118]. A response indicating that a particular service is not associated with a particular address and/or port can be considered an error. Step 532 explains that the follow-up probe associated with the response is executed and that executing the follow-up probe may include transmitting a follow-up pay and determining other addresses or ports to probe; Fig. 5B; [0019]. Thus, a follow-up probe can be sent that utilizes different addresses or ports, in response to receiving a response resulting from the transmittal of a first probe).

WRITTEN OPINION OF THE
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International application No.

PCT/IB2023/058074

Supplemental Box

In case the space in any of the preceding boxes is not sufficient.
Continuation of:

Claims 5 and 15 lack an inventive step under PCT Article 33(3) as being obvious over US 2021/0105304 to Expanse Inc..

Regarding Claim 5, the primary embodiment of Expanse Inc. discloses the method of claim 1, but fails to explicitly disclose wherein the network protocol includes any one of port: 80, 8080, 20, 21, 22, 25, 110, 143, 194, and 443, in the primary embodiment. However in a secondary embodiment, Expanse Inc. teaches a network mapping system (Fig. 19; [0201]), wherein the network protocol includes any one of port 80, 8080, 20, 21, 22, 25, 110, 143, 194, and 443 (the network scanner 1932 may probe the presence of HTTP on ports 80 and 8080; Fig. 19; [0209]).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the primary embodiment of Expanse Inc. with the protocol probing features of the secondary embodiment. The motivation for doing so would have been to make vulnerability assessment more complete by analyzing vulnerability of particular services and/or ports, thereby reducing the risk of service exploitation by an unauthorized entity or hostile actor (Fig. 19; Para. [0209]).

Regarding Claim 15, the primary embodiment of Expanse Inc. discloses the system of claim 10, but fails to explicitly disclose wherein the network protocol includes any one of port: 80, 8080, 20, 21, 22, 25, 110, 143, 194, and 443, in the primary embodiment.

However in a secondary embodiment, Expanse Inc. teaches a network mapping system (Fig. 19; [0201]), wherein the network protocol includes any one of port 80, 8080, 20, 21, 22, 25, 110, 143, 194, and 443 (the network scanner 1932 may probe the presence of HTTP on ports 80 and 8080; Fig. 19; [0209]).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the primary embodiment of Expanse Inc. with the protocol probing features of the secondary embodiment. The motivation for doing so would have been to make vulnerability assessment more complete by analyzing vulnerability of particular services and/or ports, thereby reducing the risk of service exploitation by an unauthorized entity or hostile actor (Fig. 19; Para. [0209]).

Claims 1-19 meet the criteria set out in PCT Article 33(4), and thus have industrial applicability because the subject matter claimed can be made or used in industry.



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EXAMINER

BROWN, ANTHONY D

ART UNIT

PAPER NUMBER

2433

DATE MAILED: 01/22/2024

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
18/357,845	07/24/2023	Roy REZNIK	WZIO P2438	7484

TITLE OF INVENTION: SYSTEM AND METHOD FOR APPLYING A POLICY ON A NETWORK PATH

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	\$1200	\$0.00	\$0.00	\$1200	04/22/2024

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the ENTITY STATUS shown above. If the ENTITY STATUS is shown as SMALL or MICRO, verify whether entitlement to that entity status still applies.

If the ENTITY STATUS is the same as shown above, pay the TOTAL FEE(S) DUE shown above.

If the ENTITY STATUS is changed from that shown above, on PART B - FEE(S) TRANSMITTAL, complete section number 5 titled "Change in Entity Status (from status indicated above)".

For purposes of this notice, small entity fees are 40% the amount of undiscounted fees, and micro entity fees are 20% the amount of undiscounted fees.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Maintenance fees are due in utility patents issuing on applications filed on or after Dec. 12, 1980. It is patentee's responsibility to ensure timely payment of maintenance fees when due. More information is available at www.uspto.gov/PatentMaintenanceFees.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), by mail or fax, or via the USPTO patent electronic filing system.

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P.O. Box 1450
Alexandria, Virginia 22313-1450

By fax, send to: (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications. **Because electronic patent issuance may occur shortly after issue fee payment, any desired continuing application should preferably be filed prior to payment of this issue fee in order not to jeopardize copendency.**

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being transmitted to the USPTO via the USPTO patent electronic filing system or by facsimile to (571) 273-2885, on the date below.

(Typed or printed name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
18/357,845	07/24/2023	Roy REZNIK	WZIO P2438	7484

TITLE OF INVENTION: SYSTEM AND METHOD FOR APPLYING A POLICY ON A NETWORK PATH

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	\$1200	\$0.00	\$0.00	\$1200	04/22/2024

EXAMINER	ART UNIT	CLASS-SUBCLASS
BROWN, ANTHONY D	2433	726-001000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

☐ Change of correspondence address (or Change of Correspondence Address form PTO/AIA/122 or PTO/SB/122) attached.

☐ "Fee Address" indication (or "Fee Address" Indication form PTO/AIA/47 or PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list

(1) The names of up to 3 registered patent attorneys or agents OR, alternatively,

(2) The name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

1 _____

2 _____

3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document must have been previously recorded, or filed for recordation, as set forth in 37 CFR 3.11 and 37 CFR 3.81(a). Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

(B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent): ☐ Individual ☐ Corporation or other private group entity ☐ Government

4a. Fees submitted: ☐ Issue Fee ☐ Publication Fee (if required)

4b. Method of Payment: (Please first reapply any previously paid fee shown above)

☐ Electronic Payment via the USPTO patent electronic filing system ☐ Enclosed check ☐ Non-electronic payment by credit card (Attach form PTO-2038)

☐ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment to Deposit Account No. _____

5. Change in Entity Status (from status indicated above)

☐ Applicant certifying micro entity status. See 37 CFR 1.29

☐ Applicant asserting small entity status. See 37 CFR 1.27

☐ Applicant changing to regular undiscounted fee status.

NOTE: Absent a valid certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.

NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.

NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

NOTE: This form must be signed in accordance with 37 CFR 1.31 and 1.33. See 37 CFR 1.4 for signature requirements and certifications.

Authorized Signature _____

Date _____

Typed or printed name _____

Registration No. _____



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
18/357,845	07/24/2023	Roy REZNIK	WZIO P2438	7484
122066	7590	01/22/2024	EXAMINER	
M&B IP Analysts, LLC 150 Morristown Road Suite 205 Bernardsville, NJ 07924-2626			BROWN, ANTHONY D	
			ART UNIT	PAPER NUMBER
			2433	
DATE MAILED: 01/22/2024				

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b) (Applications filed on or after May 29, 2000)

The Office has discontinued providing a Patent Term Adjustment (PTA) calculation with the Notice of Allowance.

Section 1(h)(2) of the AIA Technical Corrections Act amended 35 U.S.C. 154(b)(3)(B)(i) to eliminate the requirement that the Office provide a patent term adjustment determination with the notice of allowance. See Revisions to Patent Term Adjustment, 78 Fed. Reg. 19416, 19417 (Apr. 1, 2013). Therefore, the Office is no longer providing an initial patent term adjustment determination with the notice of allowance. The Office will continue to provide a patent term adjustment determination with the Issue Notification Letter that is mailed to applicant approximately three weeks prior to the issue date of the patent, and will include the patent term adjustment on the patent. Any request for reconsideration of the patent term adjustment determination (or reinstatement of patent term adjustment) should follow the process outlined in 37 CFR 1.705.

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

OMB Clearance and PRA Burden Statement for PTOL-85 Part B

The Paperwork Reduction Act (PRA) of 1995 requires Federal agencies to obtain Office of Management and Budget approval before requesting most types of information from the public. When OMB approves an agency request to collect information from the public, OMB (i) provides a valid OMB Control Number and expiration date for the agency to display on the instrument that will be used to collect the information and (ii) requires the agency to inform the public about the OMB Control Number's legal significance in accordance with 5 CFR 1320.5(b).

The information collected by PTOL-85 Part B is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 30 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450. Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. The United States Patent and Trademark Office (USPTO) collects the information in this record under authority of 35 U.S.C. 2. The USPTO's system of records is used to manage all applicant and owner information including name, citizenship, residence, post office address, and other information with respect to inventors and their legal representatives pertaining to the applicant's/owner's activities in connection with the invention for which a patent is sought or has been granted. The applicable Privacy Act System of Records Notice for the information collected in this form is COMMERCE/PAT-TM-7 Patent Application Files, available in the Federal Register at 78 FR 19243 (March 29, 2013).

<https://www.govinfo.gov/content/pkg/FR-2013-03-29/pdf/2013-07341.pdf>

Routine uses of the information in this record may include disclosure to:

- 1) law enforcement, in the event that the system of records indicates a violation or potential violation of law;
- 2) a federal, state, local, or international agency, in response to its request;
- 3) a contractor of the USPTO having need for the information in order to perform a contract;
- 4) the Department of Justice for determination of whether the Freedom of Information Act (FOIA) requires disclosure of the record;
- 5) a Member of Congress submitting a request involving an individual to whom the record pertains, when the individual has requested the Member's assistance with respect to the subject matter of the record;
- 6) a court, magistrate, or administrative tribunal, in the course of presenting evidence, including disclosures to opposing counsel in the course of settlement negotiations;
- 7) the Administrator, General Services Administration (GSA), or their designee, during an inspection of records conducted by GSA under authority of 44 U.S.C. 2904 and 2906, in accordance with the GSA regulations and any other relevant (i.e., GSA or Commerce) directive, where such disclosure shall not be used to make determinations about individuals;
- 8) another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c));
- 9) the Office of Personnel Management (OPM) for personnel research purposes; and
- 10) the Office of Management and Budget (OMB) for legislative coordination and clearance.

If you do not furnish the information requested on this form, the USPTO may not be able to process and/or examine your submission, which may result in termination of proceedings, abandonment of the application, and/or expiration of the patent.

Notice of Allowability	Application No. 18/357,845	Applicant(s) REZNIK et al.	
	Examiner ANTHONY D BROWN	Art Unit 2433	AIA (FITF) Status Yes

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to action filed 12/7/2023.
☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.

2. ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

3. ☒ The allowed claim(s) is/are 1-21. As a result of the allowed claim(s), you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to PPHfeedback@uspto.gov.

4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

Certified copies:

a) ☐ All b) ☐ Some* c) ☐ None of the:

1. ☐ Certified copies of the priority documents have been received.

2. ☐ Certified copies of the priority documents have been received in Application No. _____.

3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)	5. ☐ Examiner's Amendment/Comment
2. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____.	6. ☐ Examiner's Statement of Reasons for Allowance
3. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material _____.	7. ☐ Other _____.
4. ☐ Interview Summary (PTO-413), Paper No./Mail Date. _____.	

/ANTHONY D BROWN/ Primary Examiner, Art Unit 2433	
--	--

<i>Search Notes</i> 	Application/Control No. 18/357,845	Applicant(s)/Patent Under Reexamination REZNIK et al.
	Examiner ANTHONY D BROWN	Art Unit 2433

CPC - Searched*		
Symbol	Date	Examiner
H04L 63/20	10/14/2023	ADB

CPC Combination Sets - Searched*		
Symbol	Date	Examiner

US Classification - Searched*			
Class	Subclass	Date	Examiner
726	1	10/14/2023	ADB

* See search history printout included with this form or the SEARCH NOTES box below to determine the scope of the search.

Search Notes		
Search Notes	Date	Examiner
See Search History (PE2E)	10/14/2023	ADB
Double Patents/Inventor	10/14/2023	ADB
NPL Search/Google Patents	10/14/2023	ADB
US Class/CPC Class with search string	10/14/2023	ADB
Updated Search	01/03/2024	ADB
NPL Search	01/03/2024	ADB

Interference Search			
US Class/CPC Symbol	US Subclass/CPC Group	Date	Examiner
H04L	63/20	01/03/2024	ADB

/ANTHONY D BROWN/ Primary Examiner, Art Unit 2433	
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<i>Index of Claims</i> 	Application/Control No. 18/357,845	Applicant(s)/Patent Under Reexamination REZNIK et al.
	Examiner ANTHONY D BROWN	Art Unit 2433

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

CLAIMS										
☒ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47										
CLAIM		DATE								
Final	Original	10/14/2023	01/03/2024							
1	1	✓	=							
2	2	✓	=							
3	3	✓	=							
4	4	✓	=							
5	5	✓	=							
6	6	✓	=							
7	7	✓	=							
8	8	✓	=							
9	9	✓	=							
10	10	✓	=							
11	11	✓	=							
12	12	✓	=							
13	13	✓	=							
14	14	✓	=							
15	15	✓	=							
16	16	✓	=							
17	17	✓	=							
18	18	✓	=							
19	19	✓	=							
20	20	✓	=							
21	21	✓	=							

Issue Classification 	Application/Control No. 18/357,845	Applicant(s)/Patent Under Reexamination REZNIK et al.
	Examiner ANTHONY D BROWN	Art Unit 2433

CPC		
Symbol	Type	Version
H04L / 63 / 20	F	2013-01-01

CPC Combination Sets				
Symbol	Type	Set	Ranking	Version
/ /				

NONE	Total Claims Allowed:	
(Assistant Examiner)	(Date)	21
/ANTHONY D BROWN/ Primary Examiner, Art Unit 2433	03 January 2024	O.G. Print Claim(s)
(Primary Examiner)	(Date)	1
		O.G. Print Figure
		1

Issue Classification 	Application/Control No. 18/357,845	Applicant(s)/Patent Under Reexamination REZNIK et al.
	Examiner ANTHONY D BROWN	Art Unit 2433

INTERNATIONAL CLASSIFICATION			
CLAIMED			
H04L	/	9	/ 40
NON-CLAIMED			
	/		/

US ORIGINAL CLASSIFICATION	
CLASS	SUBCLASS
726	1

CROSS REFERENCES(S)						
CLASS	SUBCLASS (ONE SUBCLASS PER BLOCK)					

NONE		Total Claims Allowed:	
(Assistant Examiner)	(Date)	21	
/ANTHONY D BROWN/ Primary Examiner, Art Unit 2433 (Primary Examiner)	03 January 2024 (Date)	O.G. Print Claim(s) 1	O.G. Print Figure 1

Issue Classification 	Application/Control No. 18/357,845	Applicant(s)/Patent Under Reexamination REZNIK et al.
	Examiner ANTHONY D BROWN	Art Unit 2433

☒ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47															
CLAIMS															
Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original
1	1	10	10	19	19										
2	2	11	11	20	20										
3	3	12	12	21	21										
4	4	13	13												
5	5	14	14												
6	6	15	15												
7	7	16	16												
8	8	17	17												
9	9	18	18												

NONE	Total Claims Allowed:	
(Assistant Examiner)	(Date)	21
/ANTHONY D BROWN/ Primary Examiner, Art Unit 2433	03 January 2024	O.G. Print Claim(s)
(Primary Examiner)	(Date)	1
		O.G. Print Figure
		1

PE2E SEARCH - Search History (Prior Art)

There are no Prior Art searches to show.

PE2E SEARCH - Search History (Interference)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	British Equivalents	Time Stamp
N1	27855	(H04L63/20).cpc.	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/03 12:31 PM
N2	7879	(726/1).cccls.	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/03 12:31 PM
N3	1	N2 AND (network ADJ path) WITH resource WITH cloud	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/03 12:31 PM
N4	12	N1 AND (network ADJ path) WITH resource WITH cloud	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/03 12:31 PM
N5	1	N1 AND determin\$3 WITH rule WITH ((another OR second OR different) ADJ (network ADJ path))	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/04 10:44 AM
N6	0	N2 AND determin\$3 WITH rule WITH ((another OR second OR different) ADJ (network ADJ path))	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/04 10:44 AM
N7	2	N1 AND (network ADJ path) WITH policy WITH external AND cloud	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/04 10:46 AM
N8	0	N2 AND (network ADJ path) WITH policy WITH external AND cloud	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/04 10:46 AM

Bibliographic Data

Application No: 18/357,845

Foreign Priority claimed: ☐ Yes ☒ No

35 USC 119 (a-d) conditions met: ☐ Yes ☒ No ☐ Met After Allowance

Verified and Acknowledged:

/ANTHONY D BROWN/

Examiner's Signature

Initials

Title:

SYSTEM AND METHOD FOR APPLYING A POLICY ON A NETWORK PATH

FILING or 371(c) DATE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.
07/24/2023	726	2433	WZIO P2438
RULE			

APPLICANTS

Wiz, Inc., New York, NY, UNITED STATES

INVENTORS

Roy REZNIK, Tel Aviv, ISRAEL

Matilda LIDGI, Tel Aviv, ISRAEL

Shai KEREN, Tel Aviv, ISRAEL

Eliran MAROM, Yehud-Monoson, ISRAEL

CONTINUING DATA

This application is a CIP of 17818898 08/10/2022

This application is a CIP of 17659163 04/13/2022

This application is a CIP of 17659164 04/13/2022

This application is a CIP of 17659165 04/13/2022

FOREIGN APPLICATIONS

IF REQUIRED, FOREIGN LICENSE GRANTED**

08/10/2023

STATE OR COUNTRY

ISRAEL

ADDRESS

M&B IP Analysts, LLC

150 Morristown Road

Suite 205

Bernardsville, NJ 07924-2626

UNITED STATES

FILING FEE RECEIVED

\$6,260

PE2E SEARCH - Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	British Equivalents	Time Stamp
L38	795	(network ADJ path) WITH policy	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/03 12:17 PM
L39	14	(network ADJ path) WITH policy WITH external	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/03 12:17 PM
L40	4	(network ADJ path) WITH policy WITH external SAME cloud	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/03 12:17 PM
L41	7	(network ADJ path) WITH policy WITH external AND cloud	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/03 12:17 PM
L42	3	(network ADJ path) WITH policy WITH external AND reachable	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/03 12:17 PM
L43	84	(network ADJ path) WITH resource WITH cloud	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/03 12:17 PM
L44	1	6 AND rule WITH ((another OR second OR different) ADJ (network ADJ path))	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/03 12:17 PM
L45	40	rule WITH ((another OR second OR different) ADJ (network ADJ path))	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/03 12:17 PM
L46	12	determin\$3 WITH rule WITH ((another OR second OR different) ADJ (network ADJ path))	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/03 12:17 PM
L47	4	determin\$3 WITH rule WITH ((another OR second OR different) ADJ (network ADJ path)) AND cloud	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/03 12:17 PM
L48	18	determin\$3 WITH (rule OR guidelines OR condition OR policy) WITH ((another OR second OR different) ADJ (network ADJ path)) AND cloud	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/03 12:17 PM
L49	129	inspect\$3 WITH (network ADJ path)	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/03 12:17 PM
L50	1	11 AND inspect\$3 WITH (network ADJ path)	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/03 12:17 PM
L51	8	inspect\$3 WITH (network ADJ path)	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/03 12:17 PM

L52	10	SAME cloud detect\$3 near3 (network ADJ path) SAME cloud	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/03 12:17 PM
L53	4	inspect\$3 near3 (network ADJ path) SAME cloud	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/03 12:17 PM
L54	20	monitor\$3 near3 (network ADJ path) SAME cloud	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/03 12:17 PM
L55	3	17 AND resource WITH (network ADJ path)	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/03 12:17 PM
L56	0	17 AND (cloud ADJ resource) WITH (network ADJ path)	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/03 12:17 PM
L57	5	(cloud ADJ resource) WITH (network ADJ path)	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/03 12:17 PM
L58	27855	(H04L63/20).cpc.	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/03 12:17 PM
L59	7879	(726/1).ccls.	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/03 12:17 PM
L60	3	21 AND determin\$3 WITH (rule OR guidelines OR condition OR policy) WITH ((another OR second OR different) ADJ (network ADJ path)) AND cloud	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/03 12:17 PM
L61	0	22 AND determin\$3 WITH (rule OR guidelines OR condition OR policy) WITH ((another OR second OR different) ADJ (network ADJ path)) AND cloud	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/03 12:17 PM
L62	1	21 AND determin\$3 WITH rule WITH ((another OR second OR different) ADJ (network ADJ path)) AND cloud	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/03 12:17 PM
L63	0	22 AND determin\$3 WITH rule WITH ((another OR second OR different) ADJ (network ADJ path)) AND cloud	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/03 12:17 PM
L64	53	21 AND (analyz\$3 OR examin\$4 OR inspect\$3) WITH (network ADJ path)	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/03 12:17 PM

L65	5	22 AND (analyz\$3 OR examin\$4 OR inspect\$3) WITH (network ADJ path)	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/03 12:17 PM
L66	8	21 AND rule WITH ((another OR second OR different) ADJ (network ADJ path))	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/03 12:17 PM
L67	5	22 AND rule WITH ((another OR second OR different) ADJ (network ADJ path))	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/03 12:17 PM
L68	109	met WITH (network ADJ path)	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/03 12:17 PM
L69	7	met WITH ((another OR different) ADJ (network ADJ path))	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/03 12:17 PM
L70	7	met WITH ((another OR different OR distinct OR seperate) ADJ (network ADJ path))	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/03 12:17 PM
L71	0	(cloud ADJ platform) SAME (private near3 hosted near3 zone)	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/03 12:17 PM
L72	2	(cloud ADJ platform) SAME (private near4 hosted near4 zone)	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/03 12:17 PM
L73	7	(cloud ADJ platform) SAME (private near7 zone)	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/03 12:17 PM

PE2E SEARCH - Search History (Interference)

There are no Interference searches to show.

Doc code: IDS

Doc description: Information Disclosure Statement (IDS) Filed

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		18357845	
	Filing Date		2023-07-24	
	First Named Inventor	Roy REZNIK		
	Art Unit		2433	
	Examiner Name	Anthony D BROWN		
	Attorney Docket Number		WZIO P2438	

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/A.D.B/	3	20180004950	A1	2018-01-04	Gupta et al.	Entire Document	
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**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**
(Not for submission under 37 CFR 1.99)

Application Number	18357845
Filing Date	2023-07-24
First Named Inventor	Roy REZNIK
Art Unit	2433
Examiner Name	Anthony D BROWN
Attorney Docket Number	WZIO P2438

	1							☐
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Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T ⁵
/A.D.B/	1	International Search Report of PCT/IB2023/058074, dated 20 November 2023. Searching Authority United States Patent and Trademark Office, Alexandria, Virginia.	☐
/A.D.B/	2	Written Opinion of the Searching Authority of PCT/IB2023/058074, dated 20 November 2023. Searching Authority United States Patent and Trademark Office, Alexandria, Virginia.	☐

If you wish to add additional non-patent literature document citation information please click the Add button **EXAMINER SIGNATURE**

Examiner Signature	/ANTHONY D BROWN/	Date Considered	01/29/2024
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*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. ² Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). ³ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁴ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁵ Applicant is to place a check mark here if English language translation is attached.

INFORMATION DISCLOSURE
STATEMENT BY APPLICANT
(Not for submission under 37 CFR 1.99)

Application Number	18357845
Filing Date	2023-07-24
First Named Inventor	Roy REZNIK
Art Unit	2433
Examiner Name	Anthony D BROWN
Attorney Docket Number	WZIO P2438

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

- ☒ That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).
- OR
- ☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).
- ☒ See attached certification statement.
- ☐ The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.
- ☐ A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Michael Ben-Shimon/	Date (YYYY-MM-DD)	2024-01-10
Name/Print	Michael Ben-Shimon	Registration Number	69610

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these records.
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3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
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PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), by mail or fax, or via the USPTO patent electronic filing system.

By mail, send to: Mail Stop ISSUE FEE
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

By fax, send to: (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications. **Because electronic patent issuance may occur shortly after issue fee payment, any desired continuing application should preferably be filed prior to payment of this issue fee in order not to jeopardize copendency.**

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being transmitted to the USPTO via the USPTO patent electronic filing system or by facsimile to (571) 273-2885, on the date below.

(Typed or printed name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
18/357,845	07/24/2023	Roy REZNIK	WZIO P2438	7484

TITLE OF INVENTION: SYSTEM AND METHOD FOR APPLYING A POLICY ON A NETWORK PATH

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	\$1200	\$0.00	\$0.00	\$1200	04/22/2024

EXAMINER	ART UNIT	CLASS-SUBCLASS
BROWN, ANTHONY D	2433	726-001000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

☐ Change of correspondence address (or Change of Correspondence Address form PTO/AIA/122 or PTO/SB/122) attached.

☐ "Fee Address" indication (or "Fee Address" Indication form PTO/AIA/47 or PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list

(1) The names of up to 3 registered patent attorneys or agents OR, alternatively,

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3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document must have been previously recorded, or filed for recordation, as set forth in 37 CFR 3.11 and 37 CFR 3.81(a). Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE WIZ, INC.

(B) RESIDENCE: (CITY and STATE OR COUNTRY) New York, New York

Please check the appropriate assignee category or categories (will not be printed on the patent): ☐ Individual ☒ Corporation or other private group entity ☐ Government

4a. Fees submitted: ☒ Issue Fee ☐ Publication Fee (if required)

4b. Method of Payment: (Please first reapply any previously paid fee shown above)

☒ Electronic Payment via the USPTO patent electronic filing system ☐ Enclosed check ☐ Non-electronic payment by credit card (Attach form PTO-2038)

☒ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment to Deposit Account No. 506438

5. Change in Entity Status (from status indicated above)

☐ Applicant certifying micro entity status. See 37 CFR 1.29

☐ Applicant asserting small entity status. See 37 CFR 1.27

☐ Applicant changing to regular undiscounted fee status.

NOTE: Absent a valid certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.

NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.

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NOTE: This form must be signed in accordance with 37 CFR 1.31 and 1.33. See 37 CFR 1.4 for signature requirements and certifications.

Authorized Signature /Michael Ben-Shimon/

Date 2024-02-07

Typed or printed name Michael Ben-Shimon

Registration No. 69610



UNITED STATES
PATENT AND TRADEMARK OFFICE

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ELECTRONIC ACKNOWLEDGEMENT RECEIPT

APPLICATION #
18/357,845

RECEIPT DATE / TIME
02/07/2024 05:16:17 PM Z ET

ATTORNEY DOCKET #
WZIO P2438

Title of Invention

SYSTEM AND METHOD FOR APPLYING A POLICY ON A NETWORK PATH

Application Information

APPLICATION TYPE Utility - Nonprovisional Application
under 35 USC 111(a)

PATENT # -

CONFIRMATION # 7484

FILED BY Sydney Manning

PATENT CENTER # 64246507

FILING DATE 07/24/2023

CUSTOMER # 122066

FIRST NAMED
INVENTOR Roy REZNIK

CORRESPONDENCE
ADDRESS -

AUTHORIZED BY Michael Ben-Shimon

Documents

TOTAL DOCUMENTS: 1

DOCUMENT	PAGES	DESCRIPTION	SIZE (KB)
WZIO_P2438_part_b_fees_2 0240207.pdf	1	Issue Fee Payment (PTO-85B)	194 KB

Digest

DOCUMENT	MESSAGE DIGEST(SHA-512)
WZIO_P2438_part_b_fees_202 40207.pdf	B85687C640CEC8318A63433A43151C4627E3A4CB9D296A125 FA16CB169CA74C4DA10CD7B6D90F96E4C6BD7E4514ED1EC A5375EF1E26F86923E2EFC7300404448

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APPLICATION #
18/357,845

RECEIPT DATE / TIME
02/07/2024 05:16:17 PM Z ET

ATTORNEY DOCKET #
WZIO P2438

Title of Invention

SYSTEM AND METHOD FOR APPLYING A POLICY ON A NETWORK PATH

Application Information

APPLICATION TYPE Utility - Nonprovisional Application
under 35 USC 111(a)

PATENT # -

CONFIRMATION # 7484

FILED BY Sydney Manning

PATENT CENTER # 64246507

AUTHORIZED BY Michael Ben-Shimon

CUSTOMER # 122066

FILING DATE 07/24/2023

CORRESPONDENCE ADDRESS -

FIRST NAMED INVENTOR Roy REZNIK

Payment Information

PAYMENT METHOD
CARD / 3356

PAYMENT TRANSACTION ID
E202427H16378236

PAYMENT AUTHORIZED BY
Sydney Manning

FEE CODE	DESCRIPTION	ITEM PRICE(\$)	QUANTITY	ITEM TOTAL(\$)
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TOTAL AMOUNT:				\$1,200.00

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IPR2025-01085

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Address: COMMISSIONER FOR PATENTS
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APPLICATION NO.	ISSUE DATE	PATENT NO.	ATTORNEY DOCKET NO.	CONFIRMATION NO.
18/357,845	03/19/2024	11936693	WZIO P2438	7484

122066 7590 02/28/2024
M&B IP Analysts, LLC
150 Morristown Road
Suite 205
Bernardsville, NJ 07924-2626

ISSUE NOTIFICATION

The projected patent number and issue date are specified above. The patent will issue electronically. The electronically issued patent is the official patent grant pursuant to 35 U.S.C. § 153. The patent may be accessed on or after the issue date through Patent Center at <https://patentcenter.uspto.gov/>. The patent will be available in both the public and the private sides of Patent Center. Further assistance in electronically accessing the patent, or about Patent Center, is available by calling the Patent Electronic Business Center at 1-888-217-9197.

The USPTO is implementing electronic patent issuance with a transition period, during which period the USPTO will mail a ceremonial paper copy of the electronic patent grant to the correspondence address of record. Additional copies of the patent (i.e., certified and presentation copies) may be ordered for a fee from the USPTO's Certified Copy Center at <https://certifiedcopycenter.uspto.gov/index.html>. The Certified Copy Center may be reached at (800)972-6382.

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b) (application filed on or after May 29, 2000)

The Patent Term Adjustment is 0 day(s). Any patent to issue from the above-identified application will include an indication of the adjustment on the front page.

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Center (<https://patentcenter.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Application Assistance Unit (AAU) of the Office of Patents Stakeholder Experience (OPSE), Stakeholder Support Division (SSD) at (571)-272-4200.

INVENTOR(s) (Please see PATENT CENTER site <https://patentcenter.uspto.gov> for additional inventors):

Roy REZNIK, Tel Aviv, ISRAEL;
Matilda LIDGI, Tel Aviv, ISRAEL;
Shai KEREN, Tel Aviv, ISRAEL;
Eliran MAROM, Yehud-Monoson, ISRAEL;

APPLICANT(s) (Please see PATENT CENTER site <https://patentcenter.uspto.gov> for additional applicants):

Wiz, Inc., New York, NY;

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
18/357,845	07/24/2023	Roy REZNIK	WZIO P2438	7484
122066	7590	03/19/2024	EXAMINER	
M&B IP Analysts, LLC			BROWN, ANTHONY D	
150 Morristown Road				
Suite 205				
Bernardsville, NJ 07924-2626				
			ART UNIT	PAPER NUMBER
			2433	
			NOTIFICATION DATE	DELIVERY MODE
			03/19/2024	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

cofficeaction@appcoll.com
pair@mb-ip.com

APPLICATION NO.	ISSUE DATE	PATENT NO.
18/357,845	19-Mar-2024	11936693

M&B IP Analysts, LLC
150 Morristown Road
Bernardsville, NJ 07924-2626

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