

NANCY G. ABUDU  
LEGAL DIRECTOR  
T/ 786.363.2707  
NABUDU@ACLUFL.ORG



RECEIVED  
JAN 17 2018  
*[Signature]*  
January 18, 2018

**Sent via U.S. Mail and e-mail**

Orlando Police Department  
Attn: Records Unit  
1250 W. South St.  
Orlando, FL 32805  
opdrecords@cityoforlando.net

AMERICAN CIVIL  
LIBERTIES UNION  
FOUNDATION OF  
FLORIDA

4343 W. FLAGLER ST.  
SUITE 400  
MIAMI, FL 33134  
WWW.ACLUFL.ORG

**Re: Public records request related to the Amazon Rekognition facial recognition service**

Dear Records Unit,

This is a request under the Florida Public Records Act on behalf of the American Civil Liberties Union of Florida.

The ACLU seeks records<sup>1</sup> relating to the Orlando Police Department's acquisition and use of facial recognition technology marketed by Amazon and its subsidiary AWS (collectively, "Amazon") under the name "Rekognition."<sup>2</sup> The Orlando Police Department has used Rekognition, according to a page on Amazon's website.<sup>3</sup> On that page, a quote attributed to Police Chief John Mina states that, "[t]he City of Orlando is excited to work with Amazon to pilot the latest in public safety software through a unique, first-of-its-kind public-private partnership."

**Records requested**

The ACLU requests all records related to Rekognition and created on or after January 1, 2015, including but not limited to:

1. Communications between any representative of the Orlando Police Department and any representative of Amazon.

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<sup>1</sup> Throughout this request, the term "records" includes, but is not limited to, any paper or electronic information, reports, evaluations, memoranda, correspondence, letters, emails, charts, graphs, flyers, meeting agendas, meeting minutes, training materials, diagrams, forms, DVDs, tapes, CDs, notes, or other similar materials.

<sup>2</sup> *Amazon Rekognition*, [https://aws.amazon.com/rekognition/?nc2=h\\_a1](https://aws.amazon.com/rekognition/?nc2=h_a1).

<sup>3</sup> *Amazon Rekognition Customers*, <https://aws.amazon.com/rekognition/customers/> (last visited Jan. 8, 2018).

2. Purchasing and procurement documents, including but not limited to: purchase orders, RFPs, licensing agreements, invoices, and contracts related to Rekognition or any related mobile application.
3. Materials that describe how Rekognition functions, including e-mails, handouts, PowerPoint presentations, advertisements, or specification documents.
4. Policies, procedures, or manuals governing the use of Rekognition and the use, sharing, or access to any related data, including the legal standard, if any, (e.g., probable cause, court order, relevance, consent) that is required before using Rekognition.
5. Training materials governing the use of Rekognition by employees of the Orlando Police Department.
6. Records referencing the public process preceding the procurement or acquisition of Rekognition, including meeting agendas or minutes, public notice, analyses, or communications between the Orlando Police Department and elected leaders or city officials.

### INFORMATION ABOUT THE REQUEST

As required by law, please acknowledge that you have received this public records request and provide an estimated timeframe in which you believe that you will be able to provide the requested information. See § 119.07(1)(c), Fla. Stat. (“A custodian of public records and his or her designee must acknowledge requests to inspect or copy records promptly and respond to such requests in good faith.”). If we have not heard from your office within 48 hours of sending this request, we will follow up to discuss when we may expect fulfillment of our request.

The ACLU of Florida is a non-profit tax-exempt organization dedicated to the protection of civil liberties and constitutional rights of all people. The ACLU serves an important public education function, regularly disseminating information of interest to the public through newsletters, news briefings, right-to-know brochures, and other public education materials. The disclosure of the requested information will “promote public awareness and knowledge of governmental actions in order to ensure that governmental officials and agencies remain accountable to the people.” *Forsberg v. Housing Authority of the City of Miami Beach*, 455 So.2d 373, 378 (Fla. 1984). Therefore, we request that you produce the requested records free of charge. However, if you are unable to do so, the ACLU will reimburse you for the reasonable costs associated with fulfilling this request, if your office has a policy of requiring the payment of a copying charge for such records. The fees and costs you may charge are governed by Section 119.07(4), Fla. Stat. **If you challenge our entitlement to a waiver of fees and anticipate that the total costs associated with fulfilling this request will exceed \$100, please contact me promptly with an estimate of the likely cost before any charges are incurred.**

If you are unable or refuse to provide part or all of the requested public information, please explain in writing and with particularity the reasons for not providing the requested public information in its entirety, as required by Section 119.07(1), Fla. Stat. If any exemption that you assert applies to only a portion of the records (as opposed to the entire record), please redact the portion you claim is exempt, provide copies of the

remainder of the record or records, and detail your reasons for the modification as required by Section 119.07(1), Fla. Stat.

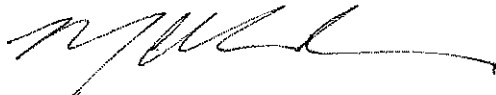
We request that you produce responsive materials in their entirety, including all attachments, appendices, enclosures and/or exhibits. To the extent that a response to this request would require you to provide multiple copies of identical material, the request is limited so that only one copy of the identical material is requested.

If any of the requested records are maintained in a common-format electronic-medium, please provide these records in such native electronic medium and not in paper form. See § 119.083(5), Fla. Stat. ("An agency must provide a copy of the record in the medium requested if the agency maintains the record in that medium"). For purposes of this request, common electronic formats include (1) American Standard Code for Information Interchange ("ASCII"), (2) files formatted in one of the Microsoft Office Suite, Corel Suite, OpenOffice Suite, or IBM's Lotus Suite applications (.doc, .xls, .ppt, .mdb, .wpd, etc.), (3) a text file (.txt), (4) hypertext markup language (.html) or similar web page language, or (5) common media file formats, including mp3, mp4, wma, wav. These common formats are the preferred electronic mediums for production. However, if any of the requested records are only maintained or only can be produced as electronic images, for example a portable document format (.pdf), (n.b., it is possible to print documents into a PDF format either by using Acrobat Professional or a free PDF driver like cutePDF.com), then as an alternative, we request an electronic-image format, preferably PDF. See § 119.01(2), Fla. Stat.

Section 119.07(1)(h-i), Fla. Stat., prohibits the destruction of any of the requested records, including any which you may claim are exempt, for a period after the date on which you receive this written request. If we institute a civil action to enforce the Florida Public Records Law with respect to the requested records, you may not dispose of the records except by court order after notice to all affected parties.

Thank you for your prompt attention to this request. If you have any questions, wish to obtain further information about the nature of the records in which we are interested, or need more information in order to expedite this request, please do not hesitate to contact me at [nabudu@aclufi.org](mailto:nabudu@aclufi.org), or (786) 363-2707.

Sincerely,



Nancy Abudu  
Legal Director

AMERICAN CIVIL  
LIBERTIES UNION  
FOUNDATION OF  
FLORIDA



AMERICAN CIVIL LIBERTIES UNION  
FOUNDATION

Oregon

**Sent via U.S. Mail and e-mail**

Washington County Sheriff's Office  
Attn: Records Staff  
215 SW Adams, MS 32  
Hillsboro, Oregon 97123  
wcsocr@co.washington.or.us

**Re: Public records request related to the Amazon Rekognition facial recognition service**

Dear Sheriff Garrett,

This is a request under the Oregon Public Records Law on behalf of the American Civil Liberties Union of Oregon.

The ACLU seeks records<sup>1</sup> relating to the Washington County Sheriff's ("Sheriff's Office") acquisition and use of facial recognition technology marketed by Amazon and its subsidiary AWS (collectively, "Amazon") under the name "Rekognition."<sup>2</sup> The Sheriff's Office has used Rekognition, according to an article featured on Amazon's website and authored by a representative of the Sheriff's Office.<sup>3</sup> According to that article, the Sheriff's Office built a database using Rekognition and populated it with at least 300,000 mugshot photos.

**Records requested**

The ACLU requests all records related to Rekognition and created on or after January 1, 2015, including but not limited to:

1. Communications between any representative of the Sheriff's Office and any representative of Amazon.

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<sup>1</sup> Throughout this request, the term "records" includes but is not limited to any paper or electronic information, reports, evaluations, memoranda, correspondence, letters, emails, charts, graphs, flyers, meeting agendas, meeting minutes, training materials, diagrams, forms, DVDs, tapes, CDs, notes, or other similar materials.

<sup>2</sup> *Amazon Rekognition*, [https://aws.amazon.com/rekognition/?nc2=h\\_a1](https://aws.amazon.com/rekognition/?nc2=h_a1).

<sup>3</sup> Chris Adzima, *Using Amazon Rekognition to Identify Persons of Interest for Law Enforcement*, AWS AI Blog, June 15, 2017, <https://aws.amazon.com/blogs/ai/using-amazon-rekognition-to-identify-persons-of-interest-for-law-enforcement/>.



2. Purchasing and procurement documents, including but not limited to: purchase orders, RFPs, licensing agreements, invoices, and contracts related to Rekognition or any related mobile application.
3. Materials that describe how Rekognition functions, including e-mails, handouts, PowerPoint presentations, advertisements, or specification documents.
4. Policies, procedures, or manuals governing the use of Recognition and the use, sharing, or access to any related data, including the legal standard, if any, (e.g., probable cause, court order, relevance, consent) that is required before using Rekognition.
5. Training materials governing the use of Rekognition by employees of the Sheriff's Office.
6. Records referencing any mobile application related to the Rekognition service.<sup>4</sup>
7. Records referencing the public process preceding the procurement or acquisition of Rekognition, including meeting agendas or minutes, public notice, analyses, or communications between the Sheriff's Office and elected leaders or county officials.

In accordance with the Oregon public records laws, please respond as soon as practicable and without unreasonable delay. As of January 1, 2018, you must acknowledge receipt of this request within five (5) business days of receiving the request, and you must complete your response to this request within ten (10) business days after the date that acknowledgment of receipt is due (*i.e.* 15 business days after receipt of this request).<sup>5</sup>

As a non-profit public interest organization, we request a waiver of the associated fees. Please provide an estimate of the time it will take fulfill the request and the estimated amount of fees that cannot be waived in accordance with the public interest.

The public interest weighs in favor of disclosure and a fee waiver. A public body “may furnish copies without charge or at a substantially reduced fee if the custodian determines that the waiver or reduction of fees is in the public interest because making the record available primarily benefits the public.”<sup>6</sup> Also, to the extent your office finds any conditional exemption applies to the requested records, the ACLU urges that the public interest in these records heavily weighs in favor of disclosure.

“A matter or action is commonly understood to be ‘in the public interest’ when it affects the community or society as a whole, in contrast to a concern or interest of a private individual or entity.”<sup>7</sup> There is a grave public interest in transparency in the manner in which law enforcement employs new technology that has potential to keep the public safe. All members of the public—victims, those suspected of committing criminal acts, their families and neighbors—are affected by how their county sheriffs conduct business. The Oregon Supreme Court has also recently

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<sup>4</sup> In the above-referenced Amazon article, a representative of the Sheriff's Office states that “[we] wanted to put the power of the [Rekognition] application into the hands of the officers. We did that by creating a mobile application.”

<sup>5</sup> See 2017 Oregon Laws Ch. 456, Sections 3, 4 and 6 (S.B. 481).

<sup>6</sup> ORS 192.440(5).

<sup>7</sup> *In Defense of Animals v. OHSU*, 199 Or.App. 160 188 (2005).

recognized that with respect to other law enforcement bodies, specifically police department and review board operations, “full disclosure may serve the public’s interest in promoting public trust in governmental action.”<sup>8</sup> With respect for these vital interests and with the hope that we can work together to build public trust in the operations of the Washington County Sheriff’s Office, the ACLU will make these records available to the public.

Should you find any records exempt from disclosure, the ACLU recognizes that a public body bears the burden of demonstrating an exemption applies and respectfully requests a written communication explaining the legal authority relied upon to deny the requested records. We also respectfully request that the explanation include the interests relied upon to find the public interest is outweighed in the context of any conditional exemption or denial of a fee waiver.

If we can provide any clarification that will help expedite your attention to our request, please contact Mat dos Santos at 503-552-2105. Thank you for your prompt attention to this matter. Please furnish all applicable records to us at [MdosSantos@aclu-or.org](mailto:MdosSantos@aclu-or.org) if in electronic format or, if in physical form, at P.O. Box 40585, Portland, OR 97240.

Sincerely,

A handwritten signature in black ink, appearing to read 'M-dos Santos', written in a cursive style.

Mat dos Santos  
Legal Director  
ACLU of Oregon

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<sup>8</sup> *American Civil Liberties Union of Oregon, Inc. v. City of Eugene*, 360 Or 269, 293 (2016).



CONSERVING THE PEACE THROUGH VALUES DRIVEN SERVICE / SHERIFF PAT GARRETT


American Civil Liberties Union of Oregon  
Attn:  
Mat dos Santos  
Legal Director  
PO Box 40585, Portland, OR 97240

**Re: Public records request related to the Amazon Rekognition facial recognition service**

Please find the responses to your specific requests below.

1. Communications between any representative of the Sheriff's Office and any representative of Amazon.
  - a. We will provide this information on a CD or DVD in such cases that the information is not in conflict with our NDA with Amazon Web Services. We will mail this information by 2/23/18.
2. Purchasing and procurement documents, including but not limited to: purchase orders, RFPs, licensing agreements, invoices, and contracts related to Rekognition or any related mobile application.
  - a. Not applicable. In the spirit of full disclosure all of our billing statements (through Dec 2017) for Amazon Web Services will be provided. This documentation will be mailed on a CD or DVD by 2/16/18.
3. Materials that describe how Rekognition functions, including e-mails, handouts, PowerPoint presentations, advertisements, or specification documents.
  - a. To clarify; we will not be providing information on how "Rekognition" functions, but we will provide all documents relating to the function of our implementation of facial recognition. This documentation will be mailed on a CD or DVD by 2/16/18.
4. Policies, procedures, or manuals governing the use of Rekognition and the use, sharing, or access to any related data, including the legal standard, if any, (e.g., probable cause, court order, relevance, consent) that is required before using Rekognition.
  - a. We do not currently have a policy directly relating to the use of facial recognition.
5. Training materials governing the use of Rekognition by employees of the Sheriff's Office.
  - a. Documentation will be mailed on a CD or DVD by 2/16/18.
6. Records referencing any mobile application related to the Rekognition service.
  - a. Documentation will be mailed on a CD or DVD by 2/16/18, except where this information is in email form. In those cases, the information will be sent by 2/23/18.
7. Records referencing the public process preceding the procurement or acquisition of Rekognition, including meeting agendas or minutes, public notice, analyses, or communications between the Sheriff's Office and elected leaders or county officials.
  - a. Not applicable.

Thank you,

  
Law Enforcement Technology Manager  
2/12/2018

CC: County Counsel



## AWS Professional Services – Statement of Work

<i>“Customer”</i>	City of Orlando
<i>“AWS”</i>	Amazon Web Services, Inc.
<i>Project Name</i>	Orlando Safety Video POC
<i>“Project Location”</i>	Orlando, FL United States of America
<i>Customer’s Engagement Contact Name and Email Address</i>	[REDACTED] [REDACTED]@cityoforlando.net
<i>Customer’s Accounts Payable / Bill To / Invoice Information</i>	[REDACTED] US
<i>Customer’s Bill To Mailing Address</i>	[REDACTED] US
<i>Customer’s Bill-To-Phone Number</i>	[REDACTED]
<i>Customer’s AWS Billing Account ID</i>	[REDACTED]
<i>Currency</i>	United States Dollars (\$)

This Statement of Work for AWS Professional Services (this “**SOW**”) is entered into between AWS and Customer. This SOW is made a part of the AWS Customer Agreement available at <http://aws.amazon.com/agreement> by and between Amazon Web Services, Inc. and Customer, or other written agreement between Amazon Web Services, Inc. and Customer governing Customer’s use of the Services (the “**Agreement**”). This SOW is effective as of the date the last party signs this SOW (the “**SOW Effective Date**”). Capitalized terms may be defined above or in the Agreement.

### Scope of the AWS Professional Services

AWS will provide the consulting and advisory services described below, for up to the total number of days set forth in this SOW.

#### Advisory on Integration and Use of AWS Services

AWS will assist Customer by providing advice on the use and integration of AWS technologies. This may include advice in the following areas:

- Architecture Planning – the development of a detailed application architecture for the proof of concept application leveraging Rekognition for video analysis
- Software Development – the development of sample configuration code for provisioning the application into the AWS environment.
- System Integration – the integration of the camera system with the configured proof of concept application.



## Schedule of Rates

AWS Professional Services are delivered solely on a “time and materials” basis. The rates for consultants are expressed in the table below as daily rates (assuming an 8-hour day). Customer will be billed for the actual time worked by the AWS consultants. The aggregate charges for consultant time under this SOW will not exceed the total in the table below, without the prior written authorization of the parties.

The currency for Schedule of Rates and Expenses is: United States Dollars (\$)

<i>Consultant Level/Role</i>	<i>Daily Rate</i>	<i>Number of Days</i>	<i>Cost</i>
<b>Adoption Incentive:</b>			
Senior Consultant	2,600	15	\$39,000
One Time Adoption Incentive Subtotal			(\$39,000)
<b>Total</b>		15	\$0

\*The Approved Days in the Schedule of Rates above are an estimate of the days required at each consultant level to complete the work under this SOW. AWS, at its sole discretion, reserves the right to use consultants at the appropriate Consultant Level for the appropriate number of days to perform the work without additional authorization from Customer. AWS will ensure that any consultant used is billed at the corresponding Daily Rate provided in the Schedule of Rates above. Furthermore, AWS will ensure that, regardless of Consultant Level and number of days, the overall Total price is not exceeded without approval from Customer. All work is contiguously scheduled. Any breaks in the engagement calendar must be scheduled in advance with AWS and must be approved in writing (email is acceptable).

## Engagement Related Expenses

Engagement expenses related to the delivery of AWS Professional Services will be billed in addition to associated consultant days as identified in the Schedule of Rates. Estimated engagement related expenses for this SOW are provided in the table below and include such expenses as lodging, meals, ground transportation, airfare, and incidental expenses. AWS will bill expenses based on actual costs incurred. The Customer will not be responsible for engagement related expenses in excess of the cost estimate provided below without the prior written authorization of the parties.

<i>Engagement Related Expenses</i>	<i>Cost Estimate</i>
Total – Not to Exceed	\$0

## Additional Terms

- 1) Some AWS Professional Services may be provided on-site at the Project Location. All other AWS Professional Services under this SOW will be provided remotely or at such other locations as may be mutually agreed.
- 2) Customer will provide AWS with timely and appropriate access to personnel, documentation, data, systems, and facilities in connection with the Professional Services described in the SOW.
- 3) AWS will provide the AWS Professional Services using skilled and experienced resources and in a professional and workmanlike manner. If AWS fails to do so then, as Customer’s sole remedy, AWS will reperform the relevant AWS Professional Services or refund the charges for such service; provided that Customer notifies AWS of the failure within three months of the date of performance.
- 4) Customer’s billing details are as set out in the table at the front of the SOW or as notified in writing from time to time by Customer. Customer consents to receiving invoices via email.

- 5) This SOW automatically terminate six months after the SOW Effective Date. Customer agrees that, upon any termination of this SOW, (a) Customer will pay AWS for the AWS Professional Services already performed or in-progress and expenses incurred through the effective date of the termination and (b) AWS will have no further obligations to Customer under this SOW.
- 6) Customer certifies that, as applicable, it has confirmed with an appropriate ethics official that there are no federal, state, local or institutional ethics or procurement laws, regulations, or other rules that would restrict or prohibit its receipt of any free services provided under this SOW.





### Acceptance and authorization

IN WITNESS WHEREOF, the parties below have executed this SOW as of the SOW Effective Date.

**AWS:**

**CUSTOMER:**

Amazon Web Services, Inc.

City of Orlando

DocuSigned by:  
[REDACTED]

DocuSigned by:  
[REDACTED]

[REDACTED]  
Full name

[REDACTED]  
Full name

Authorized Representative  
Title

Chief Procurement Officer  
Title

December 19, 2017  
Date

December 19, 2017  
Date



## Certificate Of Completion

Envelope Id: [REDACTED] Status: Completed  
 Subject: City of Orlando AWS Professional Services Statement of Work (2017)  
 Document Type: AWSCA  
 Legal VP: Kimball  
 Bulk Send: No  
 Source Envelope:  
 Document Pages: 4 Signatures: 2 Envelope Originator:  
 Certificate Pages: 2 Initials: 0 [REDACTED]  
 AutoNav: Enabled ATTN: Legal Department  
 Envelopeld Stamping: Enabled [REDACTED]  
 Time Zone: (UTC 08:00) Pacific Time (US & Canada) [REDACTED]  
 [REDACTED]@amazon.com  
 IP Address: [REDACTED]

## Record Tracking

Status: Original Holder: [REDACTED] Location: DocuSign  
 19 Dec 2017 | 06:29 [REDACTED]@amazon.com

## Signer Events

[REDACTED]  
 [REDACTED]@cityoforlando.net  
 Chief Procurement Officer  
 Security Level: Email, Account Authentication (None)

## Signature

DocuSigned by:  
 [REDACTED]  
 Using IP Address: 119.071(3)(a)  
 Security System

## Timestamp

Sent: 19 Dec 2017 | 06:32  
 Viewed: 19 Dec 2017 | 07:03  
 Signed: 19 Dec 2017 | 12:54

**Electronic Record and Signature Disclosure:**  
 Not Offered via DocuSign

[REDACTED]  
 [REDACTED]@amazon.com  
 Authorized Representative  
 Amazon  
 Security Level: Email, Account Authentication (None)

DocuSigned by:  
 [REDACTED]  
 Using IP Address: 119.071(3)(a)  
 Security System  
 Signed using mobile

Sent: 19 Dec 2017 | 12:59  
 Viewed: 19 Dec 2017 | 15:35  
 Signed: 19 Dec 2017 | 15:35

**Electronic Record and Signature Disclosure:**  
 Not Offered via DocuSign

## In Person Signer Events

## Signature

## Timestamp

## Editor Delivery Events

## Status

## Timestamp

## Agent Delivery Events

## Status

## Timestamp

[REDACTED]  
 [REDACTED]@amazon.com  
 Amazon  
 Security Level: Email, Account Authentication (None)

**VIEWED**  
 Using IP Address: 119.071(3)(a)  
 Security System

Sent: 19 Dec 2017 | 12:55  
 Viewed: 19 Dec 2017 | 12:59  
 Completed: 19 Dec 2017 | 12:59

**Electronic Record and Signature Disclosure:**  
 Not Offered via DocuSign

## Intermediary Delivery Events

## Status

## Timestamp

## Certified Delivery Events

## Status

## Timestamp

## Carbon Copy Events

## Status

## Timestamp



Carbon Copy Events	Status	Timestamp
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<p>[REDACTED] [REDACTED]@amazon.com Amazon Security Level: Email, Account Authentication (None) <b>Electronic Record and Signature Disclosure:</b> Not Offered via DocuSign</p>	<p><b>COPIED</b></p>	<p>Sent: 19 Dec 2017   06:32</p>
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<p>[REDACTED] [REDACTED]@amazon.com Security Level: Email, Account Authentication (None) <b>Electronic Record and Signature Disclosure:</b> Not Offered via DocuSign</p>	<p><b>COPIED</b></p>	<p>Sent: 19 Dec 2017   06:32</p>
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<p>[REDACTED] [REDACTED]@amazon.com Security Level: Email, Account Authentication (None) <b>Electronic Record and Signature Disclosure:</b> Not Offered via DocuSign</p>	<p><b>COPIED</b></p>	<p>Sent: 19 Dec 2017   06:32 Viewed: 19 Dec 2017   15:48</p>
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<p>[REDACTED] [REDACTED]@amazon.com Security Level: Email, Account Authentication (None) <b>Electronic Record and Signature Disclosure:</b> Not Offered via DocuSign</p>	<p><b>COPIED</b></p>	<p>Sent: 19 Dec 2017   15:35</p>
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Notary Events	Signature	Timestamp
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Envelope Summary Events	Status	Timestamps
Envelope Sent	Hashed/Encrypted	19 Dec 2017   15:35
Certified Delivered	Security Checked	19 Dec 2017   15:35
Signing Complete	Security Checked	19 Dec 2017   15:35
Completed	Security Checked	19 Dec 2017   15:35

Payment Events	Status	Timestamps
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# Redaction Log

Reason	Page (# of occurrences)	Description
119.071(3)(a) - Security System Information	5 (3)	---

## MUTUAL NONDISCLOSURE AGREEMENT

This Mutual Nondisclosure Agreement (this “Agreement”), effective as of June 20, 2017 (the “Effective Date”), is made between Amazon.com, Inc., a Delaware corporation (“Amazon.com”), and Washington County Oregon, a Oregon governmental corporation (“Company”). In connection with the parties’ commercial relationship or discussions about a possible relationship or transaction (the “Relationship”), each party may receive confidential information from the other party. Accordingly, Amazon.com and Company hereby agree as follows:

**1. Affiliates; Confidential Information.** The term “Affiliate” means, with respect to either party, any entity that directly or indirectly controls, is controlled by or is under common control with that party, and the term “Confidential Information” means all nonpublic information concerning the Relationship disclosed by either party, its Affiliates, or their agents (as applicable, such entities collectively, the “Disclosing Party”) to the other party, its Affiliates, or their agents (collectively, the “Receiving Party”) that is designated as confidential or that, given the nature of the information or the circumstances surrounding its disclosure, reasonably should be considered as confidential. Confidential Information includes, without limitation (i) nonpublic information relating to the Disclosing Party’s technology, products, services, processes, data, customers, business plans and methods, promotional and marketing activities, finances and other business affairs, (ii) third-party information that the Disclosing Party is obligated to keep confidential, and (iii) the nature, content and existence of a Relationship, discussions or negotiations between the parties.

**2. Exclusions.** Confidential Information does not include any information that (i) is or becomes publicly available without breach of this Agreement (provided, however, information that is rumored or reported does not become public based only on such rumors or reports), (ii) was known by the Receiving Party prior to its receipt from the Disclosing Party, (iii) is disclosed to the Receiving Party from any third party, except where the Receiving Party knows, or reasonably should know, that such disclosure constitutes a wrongful or tortious act, or (iv) is independently developed by the Receiving Party without use of any Confidential Information.

**3. Use and Disclosure of Confidential Information.** The Receiving Party will use Confidential Information only in connection with the Relationship. Except as provided in this Agreement, the Receiving Party will not disclose Confidential Information to

anyone without the Disclosing Party’s prior written consent. The Receiving Party will take reasonable measures to avoid disclosure, dissemination or unauthorized use of Confidential Information.

**4. Receiving Party Personnel; Affiliates.** The Receiving Party will restrict the possession, knowledge and use of Confidential Information to its directors, officers, employees, contractors, agents, legal and accounting advisers, and entities controlled by the Receiving Party (collectively, “Personnel”) who (i) have a need to know Confidential Information in connection with the Relationship, (ii) are informed of the confidential nature of the Confidential Information, and (iii) have obligations with respect to the Confidential Information that are consistent with this Agreement. Each of Amazon.com and the Company will ensure that its Affiliates comply with this Agreement.

**5. Disclosures to Governmental Entities.** The Receiving Party may disclose Confidential Information as required to comply with orders of governmental entities that have jurisdiction over it or as otherwise required by law.

**6. Ownership of Confidential Information.** All Confidential Information will remain the exclusive property of the Disclosing Party. The Disclosing Party’s disclosure of Confidential Information will not constitute an express or implied grant to the Receiving Party of any rights to or under the Disclosing Party’s patents, copyrights, trade secrets, trademarks or other intellectual property rights. Except to the extent permitted by applicable law in the absence of any express license or other grant of rights, neither party will use any trade name, trademark, logo or any other proprietary rights of the other party (or any of its Affiliates) in any manner without prior written authorization of such use by a Vice President of such other party.

**7. Notice of Unauthorized Use.** The Receiving Party will notify the Disclosing Party promptly upon discovery of any unauthorized use or disclosure of Confidential Information or any other breach of this Agreement by the Receiving Party. The Receiving Party will cooperate with the Disclosing Party to help the Disclosing Party regain possession of such Confidential Information and prevent its further unauthorized use and disclosure.

**8. Return of Confidential Information.** Subject to compliance with orders of governmental entities that have jurisdiction over it or as otherwise required by law, the Receiving Party will return or destroy all tangible



materials or portions thereof constituting Confidential Information (including, without limitation, all summaries, copies and excerpts of Confidential Information) promptly following the Disclosing Party's written request.

**9. Injunctive Relief.** The Receiving Party acknowledges that a breach of its obligations under this Agreement could cause irreparable harm to the Disclosing Party as to which monetary damages may be difficult to ascertain or an inadequate remedy. The Receiving Party therefore agrees that the Disclosing Party will have the right, in addition to its other rights and remedies, to seek injunctive relief for any violation of this Agreement.

**10. Scope; Termination.** This Agreement covers Confidential Information disclosed by the Disclosing Party on and after the Effective Date. This Agreement automatically will terminate upon the earlier of (i) termination of all written agreements between the parties or their Affiliates regarding the Relationship, or (ii) if no agreements are executed, termination of discussions between the parties or their Affiliates regarding the Relationship or delivery of written notice terminating this Agreement; provided, however, that (i) each party's obligations with respect to the other party's Confidential Information will survive for three (3) years following termination, and (ii) Sections 6, 9, 10, and 11 will survive indefinitely.

**11. Miscellaneous.**

**11.1** This Agreement constitutes the entire agreement between the parties relating to the matters discussed herein and supercedes all prior communications and agreements between the parties with respect thereto. This Agreement may be amended, modified, or waived only with the mutual written consent of the parties hereto. This Agreement will not be assignable by either party without the prior written consent of the other party; provided that prior written consent will not be required for any assignment by a party to an Affiliate. Subject to the limitations set forth in this Agreement, this Agreement will inure to the benefit of and be binding upon the parties and their respective successors and assigns.

**11.2** The Disclosing Party acknowledges that the Receiving Party may now have, or in the future may develop or receive, information that is the same as, or similar to, Confidential Information without having breached this Agreement. Nothing in this Agreement (a) prevents the Receiving Party from using, for any purpose and without compensating the Disclosing Party, information retained in the memory of the Receiving Party's Personnel who have had access to Confidential Information or (b) obligates the Receiving Party to restrict the scope of employment of the Receiving Party's

Personnel; provided, however, that this section does not create a license under any copyright or patent of the Disclosing Party.

**11.3** If a provision of this Agreement is held invalid under any applicable law, such invalidity will not affect any other provision of this Agreement that can be given effect without the invalid provision. Further, all terms and conditions of this Agreement will be deemed enforceable to the fullest extent permissible under applicable law, and, when necessary, the court is requested to reform any and all terms or conditions to give them such effect.

**11.4** This Agreement will be governed by internal laws of the State of Washington, without reference to its choice of law rules. Exclusive jurisdiction over and venue of any suit arising out of or relating to this Agreement will be in the state and federal courts located in King County, Washington, and each of the parties hereto consents to the personal jurisdiction of, and venue in, those courts.

**11.5** All notices hereunder will be given in writing, will refer to this Agreement and will be personally delivered or sent by overnight courier, electronic mail, or registered or certified mail (return receipt requested) to the address set forth below the parties' signatures at the end this Agreement.

The parties have executed this Agreement as of the Effective Date.

**Amazon.com, Inc.**

By: [REDACTED], its Authorized Representative  
Print Name: [REDACTED]  
Date Signed: June 21, 2017  
Courier: [REDACTED]  
Mail: [REDACTED]  
Email: [REDACTED]@amazon.com  
Attention: General Counsel

**Company:** Washington County Oregon

By: [REDACTED], its CIO  
Print Name: [REDACTED]  
Date Signed: June 20, 2017  
Mail: [REDACTED]  
Email: [REDACTED]@co.washington.or.us  
Attention: Mailstop 1





Billing Statement: 2016-12-01 to 2016-12-31

Date Printed: 2018-01-18

Name: [REDACTED]

Account Number: [REDACTED]

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**Total** **\$31.48 USD**

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**AWS Service Charges** **\$31.48**

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Usage Charges and Recurring Fees \$31.48

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[Invoice 87650510](#) AWS Service: Usage charge for 2017-01-03 \$31.48  
this statement period

### Other Details

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Payment Summary \$31.48

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AWS Services Usage Charge: Payment received 2017-01-03 \$31.48  
for invoice 87650510

### Details

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**AWS Service Charges** **\$31.48**

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Cognito Sync \$0.00

**US West (Oregon)** **\$0.00**

Amazon Cognito Sync CognitoSync \$0.00

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Cognito Sync operation free tier \$0.00  
3 CognitoSyncOp-Mo

Data Transfer \$0.00

**US East (N. Virginia)** **\$0.00**

<b>Bandwidth</b>		<b>\$0.00</b>
\$0.000 per GB - data transfer in per month	0.000000280 GB	\$0.00
\$0.000 per GB - data transfer out under the monthly global free tier	0.000002 GB	\$0.00
<b>US West (Oregon)</b>		<b>\$0.00</b>
<b>AWS Data Transfer USW2-USE1-AWS-Out-Bytes</b>		<b>\$0.00</b>
\$0.000 per GB - data transfer out under the monthly global free tier	0.000010 GB	\$0.00
<b>Bandwidth</b>		<b>\$0.00</b>
\$0.000 per GB - data transfer in per month	2.547 GB	\$0.00
\$0.000 per GB - data transfer out under the monthly global free tier	0.018 GB	\$0.00
<b>Rekognition</b>		<b>\$30.99</b>
<b>US West (Oregon)</b>		<b>\$30.99</b>
<b>Amazon Rekognition USW2-ImagesProcessed</b>		<b>\$30.99</b>
Images Processed: 0 - 5000 images processed per month, 0 USD	5,000 Images Processed	\$0.00
Images Processed: 5001 - 1 MM images processed per month, 1.00 USD per 1000 images processed.	30,989 Images Processed	\$30.99
<b>Simple Notification Service</b>		<b>\$0.00</b>
<b>US West (Oregon)</b>		<b>\$0.00</b>
<b>Amazon Simple Notification Service USW2-Requests-Tier1</b>		<b>\$0.00</b>
First 1,000,000 Amazon SNS API Requests per month are free	1 Requests	\$0.00
<b>Simple Queue Service</b>		<b>\$0.00</b>
<b>US West (Oregon)</b>		<b>\$0.00</b>
<b>Amazon Simple Queue Service USW2-Requests-Tier1</b>		<b>\$0.00</b>
First 1,000,000 Amazon SQS Requests per month are free	1 Requests	\$0.00

Simple Storage Service		\$0.49
<b>US East (N. Virginia)</b>		<b>\$0.00</b>
Amazon Simple Storage Service Requests-Tier1		\$0.00
\$0.00 per request - PUT, COPY, POST, or LIST requests under the monthly global free tier	9 Requests	\$0.00
<b>US West (Oregon)</b>		<b>\$0.49</b>
Amazon Simple Storage Service USW2-Requests-Tier1		\$0.47
\$0.00 per request - PUT, COPY, POST, or LIST requests under the monthly global free tier	1,991 Requests	\$0.00
\$0.005 per 1,000 PUT, COPY, POST, or LIST requests	94,658 Requests	\$0.47
Amazon Simple Storage Service USW2-Requests-Tier2		\$0.02
\$0.00 per request - GET and all other requests under the monthly global free tier	20,000 Requests	\$0.00
\$0.004 per 10,000 GET and all other requests	51,779 Requests	\$0.02
Amazon Simple Storage Service USW2-TimedStorage-ByteHrs		\$0.00
\$0.000 per GB - storage under the monthly global free tier	0.593 GB-Mo	\$0.00



Billing Statement: 2017-12-01 to 2017-12-31

Date Printed: 2018-01-18

Name: [REDACTED]

Account Number: [REDACTED]

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**Total** **\$343.95 USD**

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**AWS Service Charges** **\$343.95**

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Usage Charges and Recurring Fees \$343.95

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[Invoice 121367465](#) AWS Service: Usage charge for 2018-01-03 \$343.95  
this statement period

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### Other Details

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Payment Summary \$343.95

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AWS Services Usage Charge: Payment received for 2018-01-03 \$343.95  
invoice 121367465

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### Details

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**AWS Service Charges** **\$343.95**

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CloudTrail \$0.02

**US East (N. Virginia)** **\$0.00**

AWS CloudTrail USE1-FreeEventsRecorded \$0.00

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0.0 per free event recorded in US East (N.Virginia) region 21 Events \$0.00

**US West (Oregon)** **\$0.02**

AWS CloudTrail USW2-DataEventsRecorded \$0.02

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0.000001 per data event recorded in US West (Oregon) region 19,871 Events \$0.02



<b>AWS CloudTrail USW2-FreeEventsRecorded</b>		<b>\$0.00</b>
0.0 per free event recorded in US West (Oregon) region	182 Events	\$0.00
<b>CloudWatch</b>		<b>\$0.00</b>
<b>US West (Oregon)</b>		<b>\$0.00</b>
<b>AmazonCloudWatch PutLogEvents</b>		<b>\$0.00</b>
First 5GB per month of log data ingested is free.	0.078 GB	\$0.00
<b>AmazonCloudWatch USW2-TimedStorage-ByteHrs</b>		<b>\$0.00</b>
First 5GB-mo per month of logs storage is free.	0.035 GB-Mo	\$0.00
<b>Data Transfer</b>		<b>\$1.09</b>
<b>AWS GovCloud (US)</b>		<b>\$1.09</b>
<b>Bandwidth</b>		<b>\$1.09</b>
\$0.155 per GB - upto 10 TB / month data transfer	7.056 GB	\$1.09
<b>GovCloud (US)</b>		<b>\$0.00</b>
<b>Bandwidth</b>		<b>\$0.00</b>
\$0.000 per GB - data transfer in per month	0.124 GB	\$0.00
<b>US East (N. Virginia)</b>		<b>\$0.00</b>
<b>AWS Data Transfer USE1-APN1-AWS-Out-Bytes</b>		<b>\$0.00</b>
\$0.000 per GB - data transfer out under the monthly global free tier	0.000138 GB	\$0.00
<b>AWS Data Transfer USE1-APN2-AWS-Out-Bytes</b>		<b>\$0.00</b>
\$0.000 per GB - data transfer out under the monthly global free tier	0.000163 GB	\$0.00
<b>AWS Data Transfer USE1-APS1-AWS-Out-Bytes</b>		<b>\$0.00</b>
\$0.000 per GB - data transfer out under the monthly global free tier	0.000196 GB	\$0.00

<b>AWS Data Transfer USE1-APS2-AWS-Out-Bytes</b>		<b>\$0.00</b>
\$0.000 per GB - data transfer out under the monthly global free tier	0.000168 GB	\$0.00
<b>AWS Data Transfer USE1-APS3-AWS-Out-Bytes</b>		<b>\$0.00</b>
\$0.000 per GB - data transfer out under the monthly global free tier	0.000164 GB	\$0.00
<b>AWS Data Transfer USE1-CAN1-AWS-Out-Bytes</b>		<b>\$0.00</b>
\$0.000 per GB - data transfer out under the monthly global free tier	0.000253 GB	\$0.00
<b>AWS Data Transfer USE1-EU-AWS-Out-Bytes</b>		<b>\$0.00</b>
\$0.000 per GB - data transfer out under the monthly global free tier	0.000253 GB	\$0.00
<b>AWS Data Transfer USE1-EUC1-AWS-Out-Bytes</b>		<b>\$0.00</b>
\$0.000 per GB - data transfer out under the monthly global free tier	0.000253 GB	\$0.00
<b>AWS Data Transfer USE1-EUW2-AWS-Out-Bytes</b>		<b>\$0.00</b>
\$0.000 per GB - data transfer out under the monthly global free tier	0.000230 GB	\$0.00
<b>AWS Data Transfer USE1-SAE1-AWS-Out-Bytes</b>		<b>\$0.00</b>
\$0.000 per GB - data transfer out under the monthly global free tier	0.000195 GB	\$0.00
<b>AWS Data Transfer USE1-USE2-AWS-Out-Bytes</b>		<b>\$0.00</b>
\$0.000 per GB - data transfer out under the monthly global free tier	0.000253 GB	\$0.00
<b>AWS Data Transfer USE1-USW1-AWS-Out-Bytes</b>		<b>\$0.00</b>
\$0.000 per GB - data transfer out under the monthly global free tier	0.000253 GB	\$0.00
<b>AWS Data Transfer USE1-USW2-AWS-Out-Bytes</b>		<b>\$0.00</b>
\$0.000 per GB - data transfer out under the monthly global free tier	0.000033 GB	\$0.00
<b>Bandwidth</b>		<b>\$0.00</b>
\$0.000 per GB - data transfer in per month	0.052 GB	\$0.00

<b>US West (Oregon)</b>		<b>\$0.00</b>
<b>AWS Data Transfer USW2-APN1-AWS-In-Bytes</b>		<b>\$0.00</b>
\$0.00 per GB - US West (Oregon) data transfer from Asia Pacific (Tokyo)	0.001 GB	\$0.00
<b>AWS Data Transfer USW2-APN2-AWS-In-Bytes</b>		<b>\$0.00</b>
\$0.00 per GB - US West (Oregon) data transfer from Asia Pacific (Seoul)	0.001 GB	\$0.00
<b>AWS Data Transfer USW2-APS1-AWS-In-Bytes</b>		<b>\$0.00</b>
\$0.00 per GB - US West (Oregon) data transfer from Asia Pacific (Singapore)	0.001 GB	\$0.00
<b>AWS Data Transfer USW2-APS1-AWS-Out-Bytes</b>		<b>\$0.00</b>
\$0.000 per GB - data transfer out under the monthly global free tier	0.000000080 GB	\$0.00
<b>AWS Data Transfer USW2-APS2-AWS-In-Bytes</b>		<b>\$0.00</b>
\$0.00 per GB - US West (Oregon) data transfer from Asia Pacific (Sydney)	0.001 GB	\$0.00
<b>AWS Data Transfer USW2-APS3-AWS-In-Bytes</b>		<b>\$0.00</b>
\$0.00 per GB - US West (Oregon) data transfer from Asia Pacific (Mumbai)	0.001 GB	\$0.00
<b>AWS Data Transfer USW2-CAN1-AWS-In-Bytes</b>		<b>\$0.00</b>
\$0.00 per GB - US West (Oregon) data transfer from Canada (Central)	0.000491 GB	\$0.00
<b>AWS Data Transfer USW2-EU-AWS-In-Bytes</b>		<b>\$0.00</b>
\$0.00 per GB - US West (Oregon) data transfer from EU (Ireland)	0.000491 GB	\$0.00
<b>AWS Data Transfer USW2-EUC1-AWS-In-Bytes</b>		<b>\$0.00</b>
\$0.00 per GB - US West (Oregon) data transfer from EU (Germany)	0.000491 GB	\$0.00
<b>AWS Data Transfer USW2-EUW2-AWS-In-Bytes</b>		<b>\$0.00</b>
\$0.00 per GB - US West (Oregon) data transfer from EU (London)	0.000489 GB	\$0.00
<b>AWS Data Transfer USW2-SAE1-AWS-In-Bytes</b>		<b>\$0.00</b>

\$0.00 per GB - US West (Oregon) data transfer from South America (Sao Paulo)	0.000492 GB	\$0.00
<b>AWS Data Transfer USW2-USE1-AWS-In-Bytes</b>		<b>\$0.00</b>
\$0.00 per GB - US West (Oregon) data transfer from US East (Northern Virginia)	0.013 GB	\$0.00
<b>AWS Data Transfer USW2-USE1-AWS-Out-Bytes</b>		<b>\$0.00</b>
\$0.000 per GB - data transfer out under the monthly global free tier	0.000219 GB	\$0.00
<b>AWS Data Transfer USW2-USE2-AWS-In-Bytes</b>		<b>\$0.00</b>
\$0.00 per GB - US West (Oregon) data transfer from US East (Ohio)	0.000491 GB	\$0.00
<b>AWS Data Transfer USW2-USW1-AWS-In-Bytes</b>		<b>\$0.00</b>
\$0.00 per GB - US West (Oregon) data transfer from US West (Northern California)	0.000491 GB	\$0.00
<b>AWS Data Transfer USW2-USW1-AWS-Out-Bytes</b>		<b>\$0.00</b>
\$0.000 per GB - data transfer out under the monthly global free tier	0.000001 GB	\$0.00
<b>Bandwidth</b>		<b>\$0.00</b>
\$0.000 per GB - data transfer in per month	0.432 GB	\$0.00
\$0.000 per GB - data transfer out under the monthly global free tier	0.648 GB	\$0.00
\$0.000 per GB - regional data transfer under the monthly global free tier	0.161 GB	\$0.00
<b>Elastic Compute Cloud</b>		<b>\$2.43</b>
<b>US West (Oregon)</b>		<b>\$2.43</b>
<b>Amazon Elastic Compute Cloud running Linux/UNIX</b>		<b>\$0.00</b>
\$0.00 per Linux t2.micro instance-hour (or partial hour) under monthly free tier	746.013 Hrs	\$0.00
<b>EBS</b>		<b>\$2.43</b>
\$0.00 per GB-month of General Purpose (SSD) provisioned storage under monthly free tier	30 GB-Mo	\$0.00
\$0.00 per GB-Month of snapshot data stored under monthly free tier	1 GB-Mo	\$0.00

\$0.05 per GB-Month of snapshot data stored - US West (Oregon)	0.967 GB-Mo	\$0.05
\$0.10 per GB-month of General Purpose SSD (gp2) provisioned storage - US West (Oregon)	23.796 GB-Mo	\$2.38
<b>Rekognition</b>		<b>\$338.72</b>
<b>AWS GovCloud (US)</b>		<b>\$332.95</b>
<b>Amazon Rekognition UGW1-ImagesProcessed</b>		<b>\$332.95</b>
Images Processed: 5001 - 1 MM images processed per month, 1.20 USD per 1000 images processed.	277,461 Images Processed	\$332.95
Images Processed: Free Tier : 0 - 5000 images processed per month, 0 USD	5,000 Images Processed	\$0.00
<b>US East (N. Virginia)</b>		<b>\$0.00</b>
<b>Amazon Rekognition USE1-MinsOfArchVideoProcessed</b>		<b>\$0.00</b>
MinsOfArchVideoProcessed: Free Tier: 0 - 1000 minutes of Archived Video per month, 0 USD	3.904 Minutes Processed	\$0.00
<b>US West (Oregon)</b>		<b>\$5.77</b>
<b>Amazon Rekognition USW2-FaceVectorsStored</b>		<b>\$3.07</b>
Storage: 0.01 USD per 1000 Faces stored per month.	307,307.903 Faces-Mo	\$3.07
Storage: Free Tier : 0 - 1000 Faces stored per month, 0 USD	1,000 Faces-Mo	\$0.00
<b>Amazon Rekognition USW2-ImagesProcessed</b>		<b>\$2.70</b>
Images Processed: 5001 - 1 MM images processed per month, 1.00 USD per 1000 images processed.	2,701 Images Processed	\$2.70
<b>Amazon Rekognition USW2-MinsOfArchVideoProcessed</b>		<b>\$0.00</b>
MinsOfArchVideoProcessed: Free Tier: 0 - 1000 minutes of Archived Video per month, 0 USD	17.477 Minutes Processed	\$0.00
<b>Relational Database Service</b>		<b>\$0.00</b>
<b>US West (Oregon)</b>		<b>\$0.00</b>
<b>Amazon RDS Service Storage</b>		<b>\$0.00</b>

\$0.00 per GB-month of provisioned GP2 storage under monthly free tier	20.000 GB-Mo	\$0.00
<b>Amazon Relational Database Service for MySQL Community Edition</b>		<b>\$0.00</b>
\$0.00 per RDS db.t2.micro instance hour (or partial hour) running MySQL under monthly free tier	744 Hrs	\$0.00
<b>Simple Storage Service</b>		<b>\$1.69</b>
<b>AWS GovCloud (US)</b>		<b>\$1.44</b>
<b>Amazon Simple Storage Service UGW1-Requests-Tier1</b>		<b>\$0.69</b>
\$0.005 per 1,000 PUT, COPY, POST, or LIST requests	137,360 Requests	\$0.69
<b>Amazon Simple Storage Service UGW1-Requests-Tier2</b>		<b>\$0.28</b>
\$0.004 per 10,000 GET and all other requests	702,391 Requests	\$0.28
<b>Amazon Simple Storage Service UGW1-TimedStorage-ByteHrs</b>		<b>\$0.47</b>
\$0.039 per GB - first 50 TB / month of storage used	12.017 GB-Mo	\$0.47
<b>US East (N. Virginia)</b>		<b>\$0.01</b>
<b>Amazon Simple Storage Service Requests-Tier1</b>		<b>\$0.00</b>
\$0.00 per request - PUT, COPY, POST, or LIST requests under the monthly global free tier	24 Requests	\$0.00
<b>Amazon Simple Storage Service Requests-Tier2</b>		<b>\$0.01</b>
\$0.00 per request - GET and all other requests under the monthly global free tier	3,104 Requests	\$0.00
\$0.004 per 10,000 GET and all other requests	5,952 Requests	\$0.01
<b>Amazon Simple Storage Service TimedStorage-ByteHrs</b>		<b>\$0.00</b>
\$0.000 per GB - storage under the monthly global free tier	0.051 GB-Mo	\$0.00
<b>US West (Oregon)</b>		<b>\$0.24</b>
<b>Amazon Simple Storage Service USW2-Requests-Tier1</b>		<b>\$0.06</b>

\$0.00 per request - PUT, COPY, POST, or LIST requests under the monthly global free tier	1,976 Requests	\$0.00
\$0.005 per 1,000 PUT, COPY, POST, or LIST requests	11,444 Requests	\$0.06
<b>Amazon Simple Storage Service USW2-Requests-Tier2</b>		<b>\$0.00</b>
\$0.00 per request - GET and all other requests under the monthly global free tier	16,896 Requests	\$0.00
<b>Amazon Simple Storage Service USW2-TimedStorage-ByteHrs</b>		<b>\$0.18</b>
\$0.000 per GB - storage under the monthly global free tier	4.949 GB-Mo	\$0.00
\$0.023 per GB - first 50 TB / month of storage used	7.853 GB-Mo	\$0.18

## *Executive Summary*

### *Enterprise Video Analytics and Predictive Analysis*

**Purpose:**

The purpose of this meeting is to brainstorm as a team to discuss the objectives, roles, department engagements and roadmap necessary for building a comprehensive plan for the City's video analytics and predictive analysis initiative.

**Summary of the current state:**

The increase in the utilization of video footage from City and Partner's systems are embedded in many if not all aspects of the City operation.

- IRIS IP surveillance network - used currently for monitoring and investigation
- City's internally deployed IP camera systems at City owned buildings - used by the owning departments and at the enterprise level (such as investigation and risk management)
- City owned transportation camera network
- Venues Cameras
- Body Worn cameras
- Drones
- Office of Communication and their utilization of web/social media and multimedia

**Opportunities:**

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Investigate an offer from Amazon Web Service (AWS) to partner with the City to build a solution, with a possible commitment to provide funding and professional services for building and executing a deployment plan.

[REDACTED]

[REDACTED]

**Challenges/Constraints:**

- Build policy to address private and sensitive information
- Build an information security framework and access control (need to know/see basis)
- Resource constraints to address the possible increase in Public Records requests
- Resource availability



Establish standards per category and possible use  
Fund availability for operational sustainability

**Recommended Approach:**

- Identify a project champion/executive sponsor
- Establish a steering committee
- Discuss inter-departmental collaboration
- Establish working teams - subject matter experts
- Identify high-level constraints – update the Challenges/Constraints section
- Identify opportunities:
  - [REDACTED]
  - [REDACTED]
  - [REDACTED]
  - Marketing venues
  - Other opportunities - Risk Management, Legal, Employee training
- Identify opportunity for utilizing video analytics to help solve specific problems:
  - Homelessness
  - Event traffic – based on timely data feeds, analytics and trending – available for public notifications
  - Government transparency

**Summary:**

The proposed plan is to utilize proven analytical tools, artificial intelligence and data science for predictive analysis. [REDACTED]

[REDACTED] The anticipated values for this initiative will be an increase in leadership awareness, operations and strategic planning.

# PSWeb Facial Recognition Training Guide



Conserving the Peace  
**SHERIFF**  
**WASHINGTON COUNTY**

Conserving the Peace through Values Driven Service  
Sheriff Pat Garrett

*Law Enforcement Technology*  
*(LET)*



## PSWeb Facial Recognition tool, what is it?

- It's a tool allowing the user to take any facial photo/image and compare it to all previously taken booking photos from our jail for possible match(s).
- It can search using either a photo or composite sketch of a face image.
- It scans facial points to compare.
- The search process will score comparisons and list possible matches in descending score(s).
- At this time it will only search the Washington County Jail inmate photo database.
- In the future hoping to include other surrounding jurisdictions.

## Where do I find the Facial Recognition tool in PSWeb?



- In PSWeb on any page, click the Search tool icon (Magnifying glass).
- Type “Facial” in the search box and click “GO”.

Washington County Sheriff's Office **PSWeb** Logout PierceL  
Password: 24 days

Report Directory 🔍 ⚙️


Admin  
Patrol  
Jail  
Records  
Civil  
Services  
Investigations  
LET  
Mapping  
CCC  
Favorites  
Common Links

Select Division: ALL  
Select Category: ALL  
Select Type: ALL

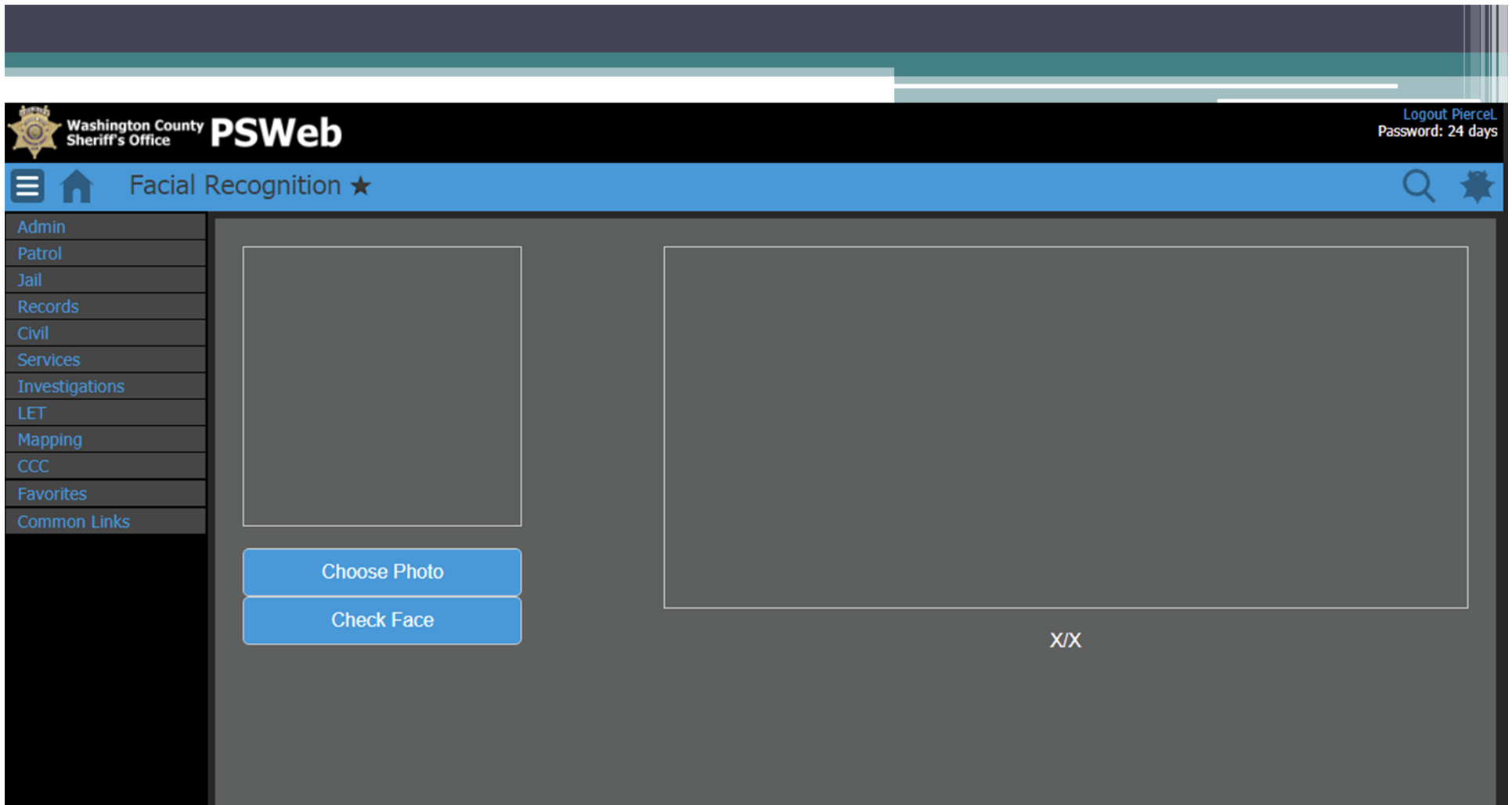
### Report Directory

	NEW	Report Number	Name	Division	Category	Description	Path	SearchTags	Location	User Roles	User Rights 1	User Rights 2	User Rights 3	User Rights 4
1	<b>NEW!</b>	PSW-0034	Facial Recognition	ALL	Common	Facial Recognition Image Search		Face, Scan, IDME, ID, Photo	LET.aws.FacialRecognition		rgtWCSO_ALL			

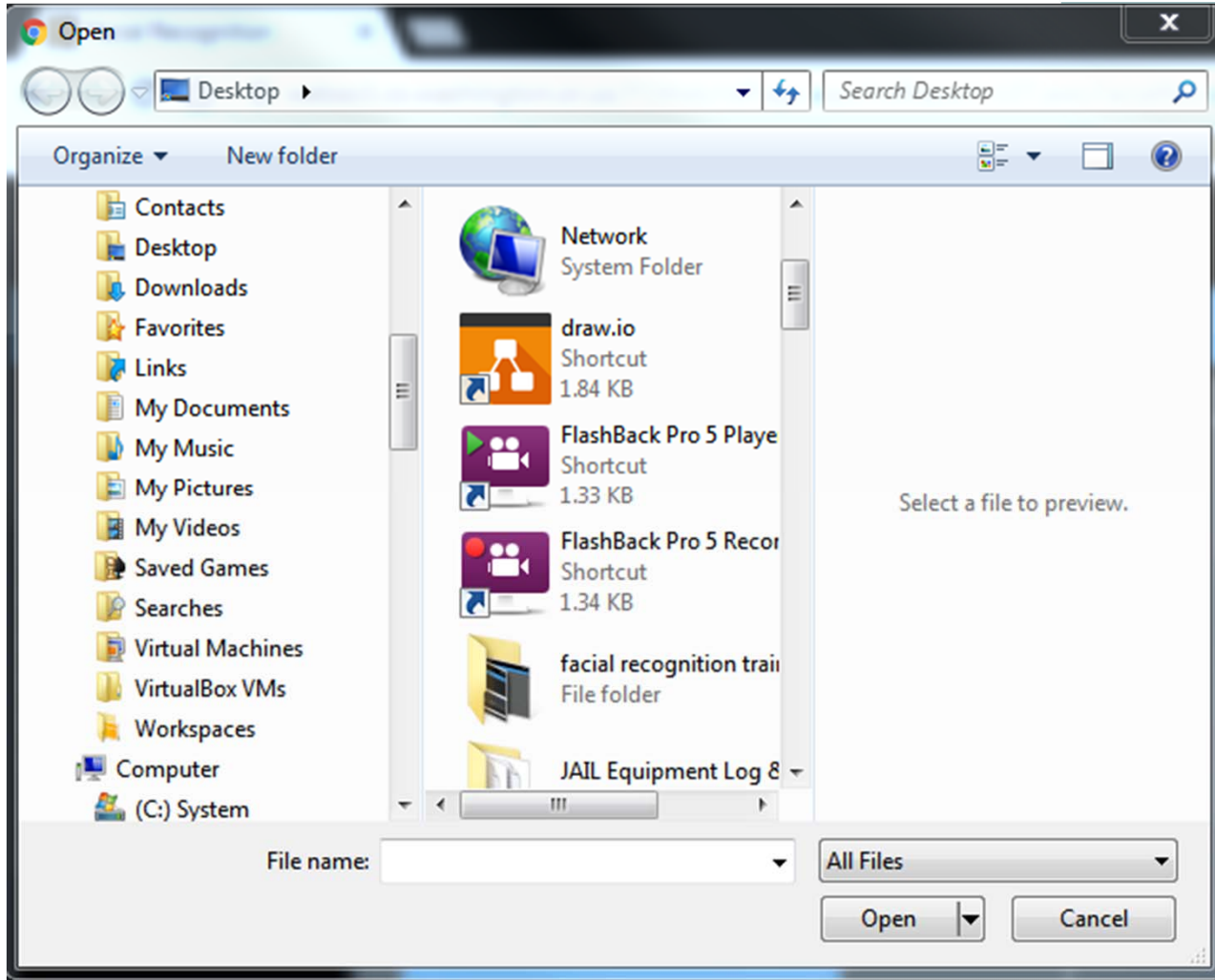
Created by WCSO Law Enforcement Technology Powered By Logi Analytics



- The Facial Recognition report will be listed in the search results.
- Click on the report name “Facial Recognition” to navigate to the facial recognition tool.



- The starting page is where you will load the photo/image being compared to and execute the scan and search process.
- Click “Choose Photo” to open file explorer and select your photo/image to be used in the search.
- Hint: to store the link to the page in your favorites, click the Star icon above next to “Facial Recognition” for future easy retrieval.



- Using the file explorer, navigate to where the image you are wanting to search is located.
- Select the image and click “Open”.

Washington County Sheriff's Office PSWeb

Logout PierceL  
Password: 24 days

Facial Recognition ★

Admin  
Patrol  
Jail  
Records  
Civil  
Services  
Investigations  
LET  
Mapping  
CCC  
Favorites  
Common Links

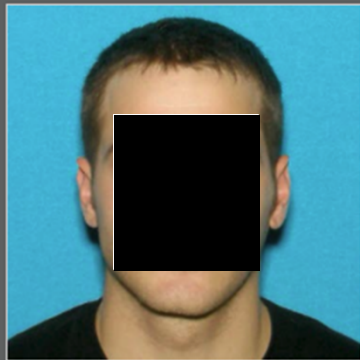
Choose Photo  
Check Face

XX

- The search tool scan will begin.
- When completed, a listing of possible match(s) will be returned in the box at the right.



- Admin
- Patrol
- Jail
- Records
- Civil
- Services
- Investigations
- LET
- Mapping
- CCC
- Favorites
- Common Links



Choose Photo  
Check Face



Booking Number:	██████████
Name:	██
DOB:	██████████
Race:	██

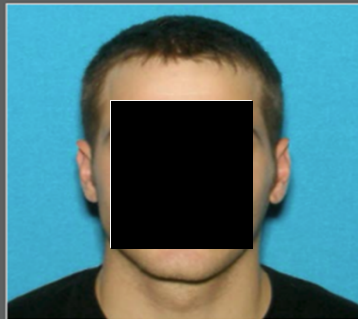
**Match 96.03%**

<-- 1/5 -->

Enlarge Compare

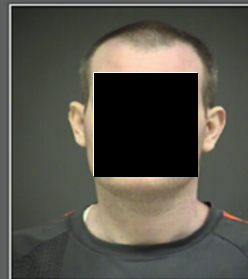
- Possible matches will be displayed one at a time in percentage match descending order.
- To navigate through all images returned from the search, click on the left and right arrows below the image to view each one along with its percentage match value.
- In the above example, it is a 96.03% match but it was an actual correct match.

- Admin
- Patrol
- Jail
- Records
- Civil
- Services
- Investigations
- LET
- Mapping
- CCC
- Favorites
- Common Links



Choose Photo

Check Face



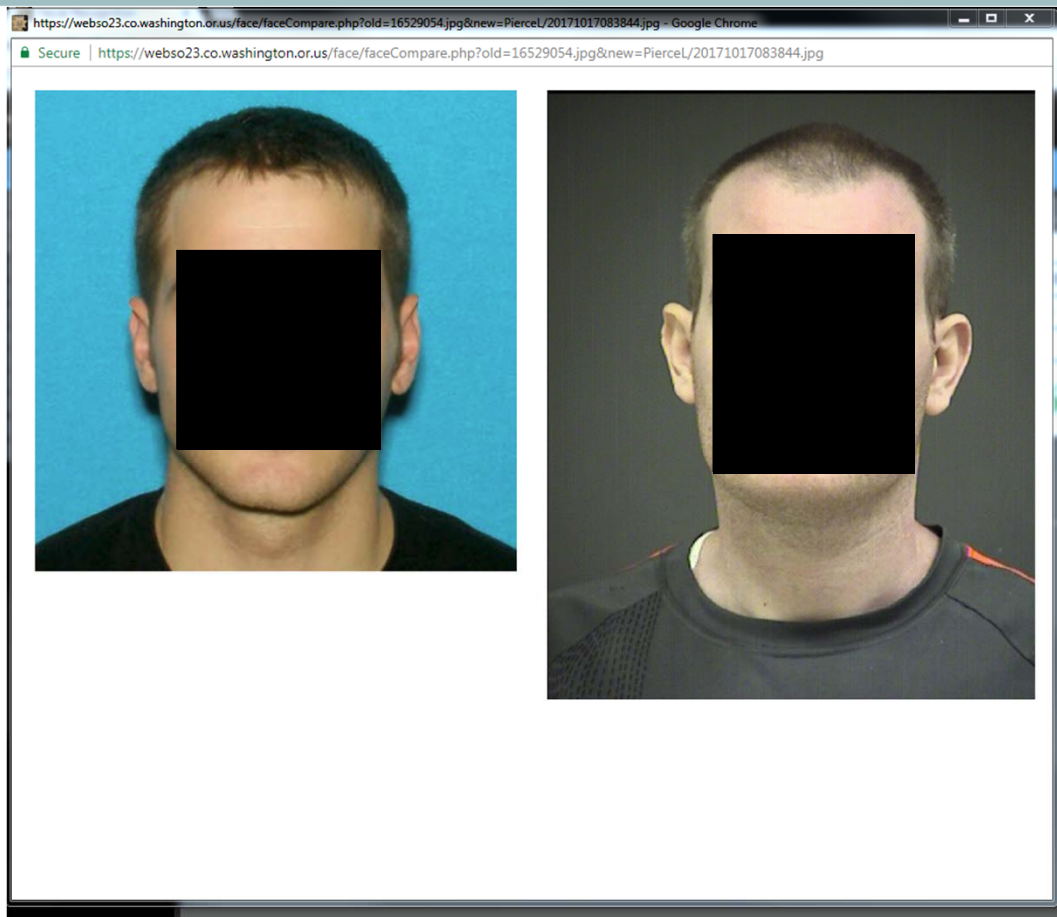
Booking Number:	██████████
Name:	████████████████████
DOB:	██████████
Race:	██

**Match 94.66%**

<-- 2/5 -->

Enlarge Compare

- In the above example, image #2 returned is a 94.66% match, but not a correct match in this example despite the high percentage value returned.
- To take a closer look, click the “Enlarge Compare” button to open a window placing both the original and possible match side by side.



- Side by side comparison after clicking “Enlarge compare” button.

- Admin
- Patrol
- Jail
- Records
- Civil
- Services
- Investigations
- LET
- Mapping
- CCC
- Favorites
- Common Links



Choose Photo  
Check Face



Booking Number:	██████████
Name:	████████████████████
DOB:	██████████
Race:	██

**Match 93.53%**

< 1/5 >

Enlarge Compare

- As you can see despite the high percentage value returned, it still requires human interpretation to determine if there is an actual match.
- In this case OJ Simpson was never found to be lodged in our jail but the tool compares strictly facial points for possible matches hence the image returned above as a possible match.

- Admin
- Patrol
- Jail
- Records
- Civil
- Services
- Investigations
- LET
- Mapping
- CCC
- Favorites
- Common Links



Choose Photo

Check Face



Booking Number: [REDACTED]

Name: [REDACTED]

DOB: [REDACTED]

Race: [REDACTED]

**Match 93.53%**

< 1/5 >

Enlarge Compare

After running an image and receiving either no results or results that don't look similar to the source image, Check face allows the user to see how the program mapped the source face. After clicking the button a series of dots appear on the source image and they should align with facial features (corners of mouths and eyes, eyebrows, etc). If they do then it is likely we don't have a match for that person. If they don't the image quality may be too poor. Attempt to crop out any confusing parts of the image and try again.



- Any questions can be emailed to “WCSO Law Enforcement Technology” or call the LET general line during business hours at x2572.

# Washington County Sheriff's Office Rekognition Case Study



## The Problem

**TIGARD POLICE DEPARTMENT**

**ATTEMPT TO ID**  
Prepared by Crime Analyst [REDACTED] [REDACTED]@tigard-or.gov  
13125 SW 14th St., Tigard, OR 97223

THE INFORMATION CONTAINED IN THIS BULLETIN DOES NOT ESTABLISH OR CONVEY AUTHORITY TO ARREST, DETAIN, OR TOW UNLESS SPECIFICALLY FEETED. THIS INFORMATION IS LAW ENFORCEMENT SENSITIVE, UNLESS OTHERWISE INDICATED, AND IS RESTRICTED TO LAW ENFORCEMENT AND LP PERSONNEL ONLY. THIS INFORMATION MAY ONLY BE DISSEMINATED WITH PROPER AUTHORITY.

(U//FOUO)

The above subject entered Lowes alone, selected \$953 in Dewalt tools, scanned them in at the self-checkout, then left without paying. He left as the passenger in the above vehicle. If you recognize this person, please contact Officer [REDACTED]

- Bulletins sent to multiple agencies.
- PDF containing images viewed by officers
- If they recognize the person in the images, they reply to emails
- Schedule lag, memory, and attrition make identifying subjects difficult



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## The Solution



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## Indexing in 3 steps

1) 

```
$sdk = new Aws\Sdk($sharedConfig);  
$client = $sdk->createS3();  
$rekog = new Aws\Rekognition\RekognitionClient($sharedConfig);
```

2) 

```
$result = $client->listObjects([  
    'Bucket' => 'wcso-let-faces',  
    'MaxKeys' => 500,  
    'Marker' => $line,  
]);
```

3) 

```
$result = $rekog->indexFaces([  
    'CollectionId' => 'wcso-let-faces',  
    'ExternalImageId' => $$s3obj['key'],  
    'Image' => [  
        'S3Object' => [  
            'Bucket' => 'wcso-let-faces',  
            'Name' => $$s3obj['key'],  
        ],  
    ],  
]);
```

**AWS**  
**re:Invent**

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## Searching in 3 steps

- 1) 

```
$sdk = new Aws\Sdk($sharedConfig);
$client = $sdk->createS3();
$rekog = new Aws\Rekognition\RekognitionClient($sharedConfig);
```
- 2) 

```
$fileData = file_get_contents($_FILES["photos"]["tmp_name"][0]);
```
- 3) 

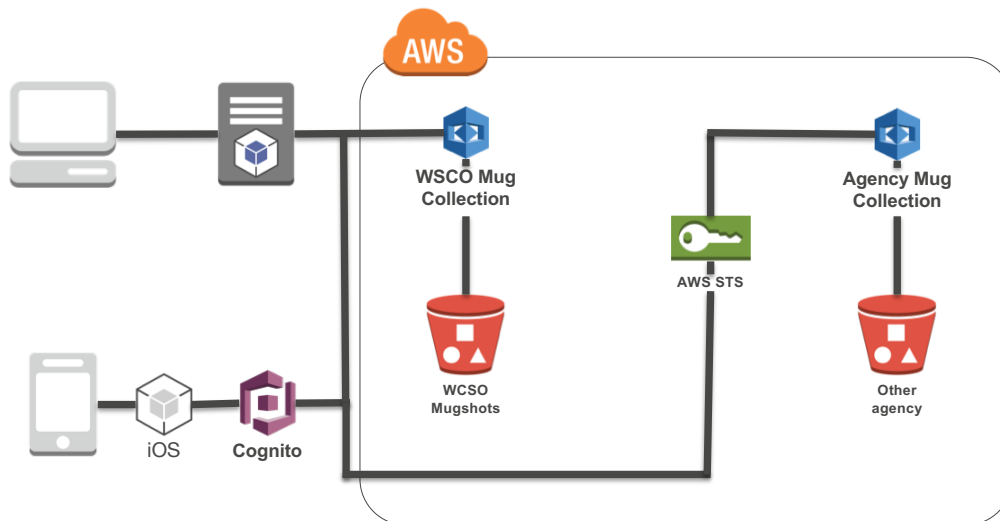
```
$result = $rekog->searchFacesByImage([
    'collectionId' => 'wco-let-faces',
    'Image' => [
        'Bytes' => $imageBytes,
    ],
    "MaxFaces" => 5
]);
```

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## Architecture

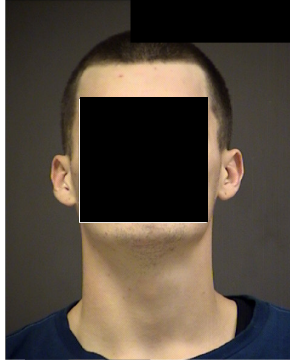


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# Real World Example



**AWS re:Invent**

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# Real World Example

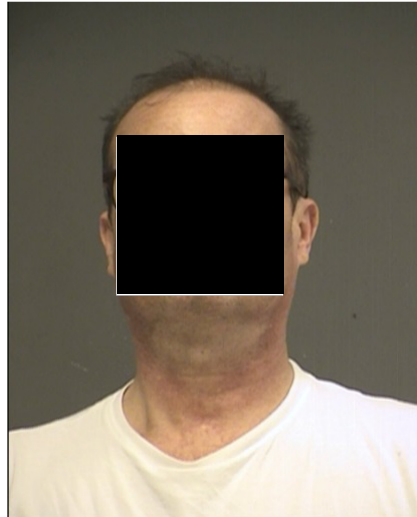


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# Real World Example



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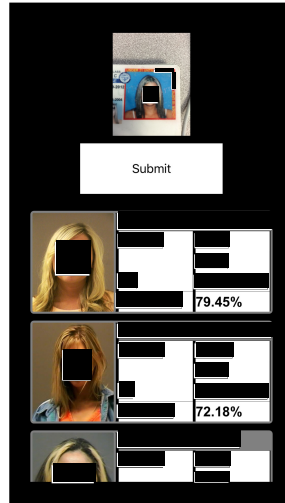
# Demo

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## Mobile App



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## Integrating with other agencies

### 1) Create IAM role which grants access to read Rekognition

```
$sdk = new Aws\Sdk($sharedConfig);
$client = $sdk->creates3();
$result = $sts->assumeRole([
    'ExternalId' => 'EXTERNALID',
    'RoleArn' => 'arn:aws:iam::XXXXXXXXXX:role/ThirdPartyRekognition',
    'RoleSessionName' => 'Rekognition',]);
```

### 2)

```
$sharedConfig = [
    'region' => 'us-west-2',
    'version' => 'latest',
    'credentials' => ['key'=>$result['Credentials']['AccessKeyId'],
        'secret'=>$result['Credentials']['SecretAccessKey'],
        'token'=>$result['Credentials']['SessionToken']],
];
$rekog = new Aws\Rekognition\RekognitionClient($sharedConfig);
```

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## Help Me Home

Search using descriptors below only if you don't have the name.

Required fields are highlighted in yellow. Height example: 501 for 5'01". Weight example: 100 for 100 lbs.

Sex: **Male** Height:

Race: **ANY** Height Variance (+/-): **2"**

Age:  Weight:

Age Variance (+/-): **1 yr** Weight Variance (+/-): **10 lbs**

Hair Color: **ANY** Client Or Primary Caregiver City: **ANY**

Eye Color: **ANY**

**Approach Suggestions:** Call his name to make eye contact and wave "hi". Use gestures to convince him it's safe.

**Noted Behaviors:** can be physical, biting, hitting, scratching, kicking, screaming.

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## Project Successes

- Identification has gone from days to minutes
- Learned AWS platform
  - Researched, designed and implemented solution within 30 days, with no previous AWS experience
- Assisted in identifying multiple cases where no other information was available to identify suspects

**AWS**  
**re:Invent**

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# AWS re:Invent

THANK YOU!

Washington County Sheriff's Office  
@co.washington.or.us

AWS re:Invent



[REDACTED]

---

**From:** [REDACTED]  
**Sent:** Wednesday, February 1, 2017 4:18 PM  
**To:** [REDACTED]  
**Cc:** [REDACTED]  
**Subject:** RE: Amazon Rekognition / Washington County Jail

[REDACTED]

Thanks for reaching out, I have really enjoyed getting to know this product and working to implement it into this new app.

Let me expand upon our use case that [REDACTED] stated. I am using the face comparison portion of the product to search for faces from unknown people. I currently have close to 300,000 images that I uploaded to S3 (all booking photos from our jail since 2001). I have indexed all those images and have created an app using Swift and a web app with PHP that will search the input image against the indexes.

I am hoping to expand our backend of images to every law enforcement agency in the metro Portland area. And possibly even to all of Oregon and beyond.

I found the product pretty easy to learn and use and it meets the expectations for the use case stated above. But there were a couple of things that I would like to see made better.

One feature that is missing, or at least is not living up to what we need it to do is the image tagging portion of the product. We would love to use it for auto tagging tattoos when we book people into jail, however, the only tag we get back when we send it a picture of a tattoo is the tag "Tattoo". This does show that the product is smart enough to know that it isn't a drawing or something like that, but what I would really like to get back is "Dragon" or "Flower" or anything like that. This would help us remove the free form that needs to be filled out by deputies and thus Dragon could become Dragn or Dragun or any other misspelling, and thus not allowing for searchability that we need.

Something minor too is that I would love the API when searchFacesByImage is called to return a reference to the S3 object that the face was indexed to. Currently I have to use the ExternalID to create the back trace, and it seems that we should be able to just get something automatically.

One final thing would be to have a feedback loop for the product that would allow it to learn. An example of this is that I have multiple images returned for one search that are not the suspect we are looking for, but one is. If I could tell you that option 2 was correct, I would like to see the machine learn more about how to get the result more accurate.

All in all I am very impressed so far and I look forward to using it more and more. I do have one final question that you may or may not be able to answer, but as we expand there is the concern about speed. If we put close to a million images in index will that create a problem with speed when we search?

Thanks for your time,  
[REDACTED]  
Sr. Information Systems Analyst  
Washington County Sheriff  
[REDACTED]

---

**From:** [redacted] [mailto:[redacted]@amazon.com]  
**Sent:** Wednesday, February 01, 2017 3:47 PM  
**To:** [redacted]; [redacted]  
**Cc:** [redacted]; [redacted]  
**Subject:** Amazon Rekognition / Washington County Jail

Hi [redacted]

Thanks for your reply and the overview of your use case. Good to know that Rekognition is meeting your expectations and will connect with [redacted] to discuss further.

Hi [redacted]

[redacted] and I are on the Amazon Rekognition team at Amazon. Per [redacted] email, we'd like to connect with you to discuss your use case. Let us know when would be convenient (next week).

Thanks,

[redacted]

[redacted]  
Sr. Business Development Manager - Amazon Rekognition

[redacted]@amazon.com

<https://aws.amazon.com/rekognition/>

---

**From:** [redacted] <[redacted]@gmail.com>  
**Date:** Wednesday, February 1, 2017 at 2:52 PM  
**To:** [redacted] <[redacted]@amazon.com>  
**Cc:** [redacted] <[redacted]@amazon.com>, [redacted] <[redacted]@amazon.com>  
**Subject:** Re: Supporting your success with AWS's Amazon Rekognition

Hello [redacted],

We are getting up and running with using Rekognition for our app that allows us to search our (Washington County Jail) booking photos for hits against unidentified suspects. I would love to have you discuss our use case with our lead developer, [redacted] and any feedback he has. Would you like to get in touch with him via email ([redacted]@co.washington.or.us) or a phone/video meeting would also be great.

We are seeing great results from the product and anticipate increasing usage by bringing on more counties into the system. And I know [redacted] would love to discuss some of the gaps he has.

Thanks for reaching out

On Tue, Jan 31, 2017 at 4:42 PM, [redacted] <[redacted]@amazon.com> wrote:

Thanks, [redacted]

Hi [redacted],



Thanks for checking out Amazon Rekognition for facial recognition. Let me know if you have questions, feedback or would like to discuss the specifics of your use case.

We look forward to your reply.

Thanks,

██████

████████████████████

Sr. Business Development Manager - Amazon Rekognition

██████ [@amazon.com](mailto:██████@amazon.com)

████████████████████

---

**From:** ██████ <██████@amazon.com>  
**Date:** Tuesday, January 31, 2017 at 2:28 PM  
**To:** "██████@gmail.com" <██████@gmail.com>  
**Cc:** ██████ <██████@amazon.com>, ██████ <██████@amazon.com>  
**Subject:** Supporting your success with AWS Rekognition

Hi ██████,

I am the Account Manager for AWS covering Oregon, and I noticed that you were leveraging our new Rekognition service. Because the service is so new, we are reaching out to customers to make sure they get all the support they need to succeed with their particular use case.

I have copied ██████ and ██████ who are both on the Rekognition product team so they can offer their expertise as needed.

Thanks!

Regards,

[REDACTED]

Account Executive, Oregon

O: [REDACTED] | C: [REDACTED] | [REDACTED] [@amazon.com](mailto:[REDACTED]@amazon.com)

*Leave Anytime Feedback On My Performance*



[re:Invent 2016 Launch Webinar Series](#)

[REDACTED]

---

**From:** [REDACTED]  
**Sent:** Saturday, February 11, 2017 10:22 AM  
**To:** [REDACTED]  
**Cc:** [REDACTED]  
**Subject:** RE: Amazon Rekognition / Washington County Sheriff / Jail (

Thanks for reaching out to the marketing coordinator. Government Summit is the best choice for me, I agree, but if the call for speakers isn't done for the big summit, I might submit for that too. I am working on the customer reference, we have our next executive staff meeting on Wednesday. Our Sheriff is a very hands on guy so it is hard to get time with him (he is out in the field a lot). I hope we can get that signed by the end of next week. A blog would be a great idea, I have never written for the software space before so that will be a welcome challenge.

I can get some images together, mostly they will be captures from surveillance cameras. The good thing in, the trade off for government working so slow is that the other hand means everything is public record so getting that to you shouldn't be a problem at all. Currently our deputies don't use cameras (body or dash), however we are currently in the process of acquiring them. When we do, we absolutely will be using them. For those samples we might need to check with the laws, as in some cases there might night be a probable cause to run the images against our booking photos. That might be another cool thing about this project, it might dictate a whole new case law on running images from body cams.

I will get you those samples next week, and keep you up on the progress of the customer reference.

Thanks,

---

**From:** [REDACTED] [REDACTED]@amazon.com]  
**Sent:** Friday, February 10, 2017 4:54 PM  
**To:** [REDACTED]  
**Cc:** [REDACTED]  
**Subject:** Re: Amazon Rekognition / Washington County Sheriff / Jail (

Hi [REDACTED]

I let our Marketing coordinator know that you are interested in co-presenting during the Rekognition session at the Government Summit. (Please confirm that is the summit that you are interested in – her suggestion and I think a good fit.) If so, I'll put in my recommendation. The schedule is full but think that we can make that happen. I'll follow up after we get the customer reference authorization filed. We could also time an AI blog with on building the app, to coincide with the event, which I think would be cool.

Aside from the tattoos (and future products) discussion, I've asked our product development team to take into account the variety of source images/video frame quality (format) that you may be working with. If you are able to share samples, that will help us be proactive with our training, where required. We are also wondering if we should be considering dashcams, bodycams, etc. Let me know if you are interested to provide feedback, samples, etc. If so, I'll coordinate more on that with the product team.

Thanks,

From: [REDACTED] <[REDACTED]@co.washington.or.us>  
Date: Thursday, February 9, 2017 at 9:20 AM  
To: [REDACTED] <[REDACTED]@amazon.com>  
Cc: [REDACTED] <[REDACTED]@amazon.com>, [REDACTED] <[REDACTED]@amazon.com>  
Subject: RE: Amazon Rekognition / Washington County Sheriff / Jail

Here is some information that you can use when presenting this use case.

We started using Rekognition because there is currently no software that allows users to quickly search hundreds of thousands of images using a face in another image. We have hundreds of requests to identify every month, most of these from security cameras or citizen provided images from phones. Deputies in the field also have a need to id people who are uncooperative or unable to provide information. Rekognition was socially beneficial because it allows us to create a mobile app and a web page that uses the same backend information.

The types of situations that we currently use the search for are:

- Attempts to identify unknown theft suspects
- Identifying unconscious or deceased individuals
- Identifying people of interest who do not have identification
- Providing leads by identifying possible witnesses and accomplices in images

Some interesting facts:

- Close to 300,000 images were uploaded to Rekognition
- Once indexed, searches take less than a minute to return results
- Prior to implementation average response from "Attempt to Identify" emails was 2-3 days, now it takes minutes
- Within 1 week of going live, the app was used to identify, and with that information, arrest a suspect who stole over \$5,000 from local stores. There were no other leads prior to the app finding the match.

Let me know if you need more information or narrative.

Thanks,

-----Original Message-----

From: [REDACTED] [mailto:[REDACTED]@amazon.com]

Sent: Wednesday, February 08, 2017 4:28 PM

To: [REDACTED]

Cc: [REDACTED]; [REDACTED]

Subject: Re: Amazon Rekognition / Washington County Sheriff / Jail

Not much that we can do about the approval process. Keep me posted. In the mean time, I'll proceed with the "A Sheriff" approach.

If you can add perspective to help build out a narrative / bullet points from your perspective, that would be helpful.

BTW- your interest to present at customer summit is noted. [REDACTED] please also take note)

Thanks,

On 2/8/17, 4:18 PM, [REDACTED] <[REDACTED]@co.washington.or.us<mailto:[REDACTED]@co.washington.or.us>> wrote:

I just ran by the sheriff's desk and he let me know that it is not possible to get that signed by tomorrow. Apparently we have to run it by county council and it has to be vetted by the commissioners.

I am only a year in the public sector, so I am still learning the ropes of government work and I can tell you it is a different pace here. When I was at eBay agile development meant that I was rolling out new products weekly. Here it takes months to get the go ahead to start a new project. Man, I only got to start using AWS because I did it on my free time and had proof of concept before I approached them.

I am going to try to get this done as quickly as possible, but in the mean time, we don't have a problem with you saying "A sheriff's office is using Rekognition to ...", I know that isn't much, but I am totally behind you showing what this product is capable of.

Thanks,

██████████

-----Original Message-----

From: ██████████ [mailto:██████████@amazon.com]

Sent: Wednesday, February 08, 2017 3:53 PM

To: ██████████

Cc: ██████████ ██████████

Subject: Re: Amazon Rekognition / Washington County Sheriff / Jail

Thanks for the quick follow up on the customer reference authorization. If we can get that by tomorrow, I think that we can include Washington County's case in our internal ppt.

That could help us build interest for law enforcement customers, and possibly drive the tattoo use case.

Please see my other comments below.

Thanks,

██████████

On 2/8/17, 12:59 PM, ██████████  
<██████████@co.washington.or.us<mailto:██████████@co.washington.or.us>> wrote:

We had our staff meeting today and they wanted to see the release agreement (so thanks for getting that to me, that will save time)

They were pretty receptive to doing the case study and allowing you to use us as an example. I will run this by them and let you know ASAP.

█ > Great. Thanks!

For the tattoos I am going to have to do some data analysis to determine how many of each majorly reoccurring tattoo we have. I know that a couple would be Dragon (as we have already discussed), 13 (this is a common gang symbol in our area), and cross. There of course are others, but I need to do the analysis.

█ > Great. Let's figure out what are the unique images, provide the team some samples, figure out how to proceed.

Another question that the E-Staff gave me today was "Can we teach it to recognize tattoos like it recognizes faces?", and what they really want is to put a tattoo of a 13 for example in, and have it return all the 13s in the system that are similar. This way we can use the engine to search for suspects when we only have an image of the tattoo.

█ > If we can add labels as discussed above, that is the easiest approach. (We can discuss this more under NDA.)

I told them that was a bit out of scope right now, but that I would bring it to you just in case it was being discussed internally for your guys and you needed another reason to do that.

█ > Thanks.

Thanks,

█

P.S. I would love to present this case study at either of the AWS summits (Gov or consumer), so if you know when calls for speakers are happening for those, I would love to submit this.

-----Original Message-----

From: █ [mailto:█@amazon.com]

Sent: Wednesday, February 08, 2017 12:34 PM

To: █

Cc: █ █

Subject: Re: Amazon Rekognition / Washington County Sheriff / Jail

[REDACTED] (moved to bcc)

[REDACTED]

Attached is the boiler plate (1 page) for customer reference/case study. Great if we can add quote and logo to the Rekognition site too. Let me know if you have questions.

I documented the specific tattoo label request, and am exploring the Mickey Mouse example (good point). How many unique, frequently occurring tattoos would you say there are? Hundreds? We'll need as many of each as possible (variety and angle of shot produce best results). I need to get with the team to take this further, which will take a couple of weeks. Our company-wide (AWS) Sales and Marketing annual event is next week, so the team is busy with preparations.

On that note, we'd love to be able to discuss your facial recognition use case (comparing person of interest against 300,000 former/current inmate's face pics) at our internal event. Let me know if you meet with the exec staff this week. (Longshot, I know).

Thanks,

[REDACTED]

On 2/6/17, 2:49 PM, [REDACTED]  
<[REDACTED]@co.washington.or.us<mailto:[REDACTED]@co.washington.or.us>> wrote:

I will have a meeting with Exec. staff to discuss using us as a case study.



In the mean time I would love to explore the tattoos bit more. As for rights to the images of the tattoos, they are public record, and as such we have the ability to share them. However, I am not sure what rights are in question when, let's say, someone has a Mickey Mouse tattoo. There are plenty of those and I can understand how that could be sticky for you.

As far as amount of pictures, we would have close to half a million, possibly more, or even double to triple that if we get surrounding counties involved.

Let me know how we can move forward with this, I am very excited.

██████████

---

From: ██████████ ██████████@amazon.com]

Sent: Sunday, February 05, 2017 12:19 PM

To: ██████████

Cc: ██████████ ██████████ ██████████ ██████████

Subject: Re: Amazon Rekognition / Washington County Sheriff / Jail

+ ██████████ (Rekognition product managers for visibility)

██████████,

Apologies for not getting back to you sooner as I was traveling. Very interesting use case. Thanks for the detailed feedback. You make some good points and suggestions. Please see my comments in line below.

We've had interest for similar use cases, and we'd like to get innovative law enforcement customers into the Rekognition reference program. (Logo and quote on the Rekognition site, and case study, etc., as appropriate.) If Washington County Sheriff is interested, I'll send you the 1-page boiler plate for approval and signature.

Thanks,

■

From: ■ <■@co.washington.or.us<mailto:■@co.washington.or.us>>

Date: Wednesday, February 1, 2017 at 4:18 PM

To: ■ <■@amazon.com<mailto:■@amazon.com>>

Cc: ■ <■@amazon.com<mailto:■@amazon.com>>, ■  
<■@amazon.com<mailto:■@amazon.com>>

Subject: RE: Amazon Rekognition / Washington County Jail

■

Thanks for reaching out, I have really enjoyed getting to know this product and working to implement it into this new app.

Let me expand upon our use case that ■ stated. I am using the face comparison portion of the product to search for faces from unknown people. I currently have close to 300,000 images that I uploaded to S3 (all booking photos from our jail since 2001). I have indexed all those images and have created an app using Swift and a web app with PHP that will search the input image against the indexes.

I am hoping to expand our backend of images to every law enforcement agency in the metro Portland area. And possibly even to all of Oregon and beyond.

■ > Good to know that you have enjoyed using the product. Great way to use the tech to automate some of the tedious task.

I found the product pretty easy to learn and use and it meets the expectations for the use case stated above. But there were a couple of things that I would like to see made better.

One feature that is missing, or at least is not living up to what we need it to do is the image tagging portion of the product. We would love to use it for auto tagging tattoos when we book people into jail, however, the only tag we get back when we send it a picture of a tattoo is the tag "Tattoo". This does show that the product is smart enough to know that it isn't a drawing or something like that, but what I would really like to get back is "Dragon" or "Flower" or anything

like that. This would help us remove the free form that needs to be filled out by deputies and thus Dragon could become Dragn or Dragun or any other misspelling, and thus not allowing for searchability that we need.

█ > Thanks for the suggestion. The current version of Rekognition is trained with a general category of "tattoo." If this is an important feature, that would presumably be used by other law enforcement applications, we would consider adding the labels, such as "dragon tattoo." It would seem that gang-affiliation, dragons, flowers and most common tattoos, could be trained with enough sample images.

If so, approx. how many of such tattoos are there? Do you have the rights to such images that we can use to train the Rekognition engine?

Something minor too is that I would love the API when searchFacesByImage is called to return a reference to the S3 object that the face was indexed to. Currently I have to use the ExternalID to create the back trace, and it seems that we should be able to just get something automatically.

█ > Good feedback. I'll need to get back to you on that. Thanks.

One final thing would be to have a feedback loop for the product that would allow it to learn. An example of this is that I have multiple images returned for one search that are not the suspect we are looking for, but one is. If I could tell you that option 2 was correct, I would like to see the machine learn more about how to get the result more accurate.

█ > Agreed. We already have this built into Amazon's Prime Photos app, and it is on the Rekognition roadmap.

All in all I am very impressed so far and I look forward to using it more and more. I do have one final question that you may or may not be able to answer, but as we expand there is the concern about speed. If we put close to a million images in index will that create a problem with speed when we search?

█ > That should not be a problem as we have customers that process tens of millions of images daily. We'll have more features on this in the near future.

Thanks for your time,

█

Sr. Information Systems Analyst

Washington County Sheriff

█

From: [REDACTED] [mailto:[REDACTED]@amazon.com]

Sent: Wednesday, February 01, 2017 3:47 PM

To: [REDACTED] [REDACTED]

Cc: [REDACTED] [REDACTED]

Subject: Amazon Rekognition / Washington County Jail

Hi [REDACTED]

Thanks for your reply and the overview of your use case. Good to know that Rekognition is meeting your expectations and will connect with [REDACTED] to discuss further.

Hi [REDACTED]

[REDACTED] and I are on the Amazon Rekognition team at Amazon. Per [REDACTED] email, we'd like to connect with you to discuss your use case. Let us know when would be convenient (next week).

Thanks,

[REDACTED]

[REDACTED]

Sr. Business Development Manager - Amazon Rekognition

[REDACTED]@amazon.com<mailto:[REDACTED]@amazon.com<mailto:[REDACTED]@amazon.com%3cmailto:[REDACTED]@amazon.com>>

[REDACTED]

<https://aws.amazon.com/rekognition/>

From: [REDACTED]  
<[REDACTED]@gmail.com<mailto:[REDACTED]@gmail.com<mailto:[REDACTED]@gmail.com%3cmailto:[REDACTED]@gmail.com>>>

Date: Wednesday, February 1, 2017 at 2:52 PM

To: [REDACTED]  
<[REDACTED]@amazon.com<mailto:[REDACTED]@amazon.com<mailto:[REDACTED]@amazon.com%3cmailto:[REDACTED]@amazon.com>>>

Cc: [REDACTED]  
<[REDACTED]@amazon.com<mailto:[REDACTED]@amazon.com<mailto:[REDACTED]@amazon.com%3cmailto:[REDACTED]@amazon.com>>>, [REDACTED]  
<[REDACTED]@amazon.com<mailto:[REDACTED]@amazon.com<mailto:[REDACTED]@amazon.com%3cmailto:[REDACTED]@amazon.com>>>

Subject: Re: Supporting your success with AWS's Amazon Rekognition

Hello [REDACTED],

We are getting up and running with using Rekognition for our app that allows us to search our (Washington County Jail) booking photos for hits against unidentified suspects. I would love to have you discuss our use case with our lead developer, [REDACTED] and any feedback he has. Would you like to get in touch with him via email [REDACTED]@co.washington.or.us<mailto:[REDACTED]@co.washington.or.us<mailto:[REDACTED]@co.washington.or.us%3cmailto:[REDACTED]@co.washington.or.us>>) or a phone/video meeting would also be great.

We are seeing great results from the product and anticipate increasing usage by bringing on more counties into the system. And I know [REDACTED] would love to discuss some of the gaps he has.

Thanks for reaching out

On Tue, Jan 31, 2017 at 4:42 PM, [REDACTED]  
<[REDACTED]@amazon.com<mailto:[REDACTED]@amazon.com<mailto:[REDACTED]@amazon.com%3cmailto:[REDACTED]@amazon.com>>> wrote:

Thanks, [REDACTED].

Hi [REDACTED]

Thanks for checking out Amazon Rekognition for facial recognition. Let me know if you have questions, feedback or would like to discuss the specifics of your use case.

We look forward to your reply.

Thanks,

█

██████████

Sr. Business Development Manager - Amazon Rekognition

█@amazon.com<mailto:█@amazon.com<mailto:█@amazon.com%3cmailto:█@amazon.com>>

██████████ <tel:██████████ >

From: ██████████

<█@amazon.com<mailto:█@amazon.com<mailto:█@amazon.com%3cmailto:█@amazon.com>>>

Date: Tuesday, January 31, 2017 at 2:28 PM

To:

█@gmail.com<mailto:█@gmail.com><mailto:█@gmail.com%3cmailto:█@gmail.com%3e">  
<█@gmail.com<mailto:█@gmail.com<mailto:█@gmail.com%3cmailto:█@gmail.com>>>

Cc: ██████████

<█@amazon.com<mailto:█@amazon.com<mailto:█@amazon.com%3cmailto:█@amazon.com>>>,  
██████████  
<█@amazon.com<mailto:█@amazon.com<mailto:█@amazon.com%3cmailto:█@amazon.com>>>

Subject: Supporting your success with AWS Rekognition

Hi █

I am the Account Manager for AWS covering Oregon, and I noticed that you were leveraging our new Rekognition service. Because the service is so new, we are reaching out to customers to make sure they get all the support they need to succeed with their particular use case.

I have copied █ and █ who are both on the Rekognition product team so they can offer their expertise as needed.

Thanks!

Regards,

[REDACTED]

Account Executive, Oregon

[REDACTED] <tel:[REDACTED]> | C: [REDACTED] <tel:[REDACTED]> |  
[REDACTED]@amazon.com<mailto:[REDACTED]@amazon.com> [REDACTED]@amazon.com%3cmailto [REDACTED]@amazon.com>>

Leave Anytime Feedback On My Performance<[https://pages.awscloud.com/anytime-feedback.html?awsrep=\[REDACTED\]@amazon.com&awsteam=AMER-ISR-Customer-Feedback@Amazon.com](https://pages.awscloud.com/anytime-feedback.html?awsrep=[REDACTED]@amazon.com&awsteam=AMER-ISR-Customer-Feedback@Amazon.com)>

[cid:image001.png@01D27FAA.189261A0]<<https://aws.amazon.com/>>

re:Invent 2016 Launch Webinar Series<[https://aws.amazon.com/about-aws/events/monthlywebinarseries/?trkcampaign=webinarseries&trk=DS\\_decjan2016\\_series](https://aws.amazon.com/about-aws/events/monthlywebinarseries/?trkcampaign=webinarseries&trk=DS_decjan2016_series)>

[REDACTED]

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**From:** [REDACTED]  
**Sent:** Wednesday, February 8, 2017 1:19 PM  
**To:** [REDACTED]  
**Subject:** Case Study for Amazon AWS Rekognition  
**Attachments:** AWS Marketing Authorization and Release[2].pdf

[REDACTED]

I would like to participate in this with Amazon. As we are currently the largest user of this product from AWS, Amazon would like to use us as an example of what the product is capable of. For that they would want us to write a testimonial about how we are using the product. (In this case we would discuss how we would use the product to determine the identity of an unknown person of interest). They would also want to know high level numbers of usage and expected use of the product. In those cases we would describe the number of booking photos we have and how many deputies would be using the app. The agreement also discusses using a video of someone from our organization discussing the product. I don't anticipate providing the video ourselves, but they may request to have someone record a video.

Finally they would want to use our logo and the Washington County Sheriff's Office name when showing the testimonial and case study.

We would not receive anything in exchange for this directly. However, I feel this would be beneficial to the organization because, being their largest user; they will keep us in mind when new improvements come to the product, and we could even have a voice when new features are needed. We also get the added benefit of showcasing that we are on the cutting edge of technology and lead the way for all law enforcement in the way of technology.

Thanks,

[REDACTED]



[REDACTED]

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**From:** [REDACTED] <[REDACTED]@amazon.com>  
**Sent:** Monday, March 6, 2017 8:43 AM  
**To:** [REDACTED]  
**Subject:** Summit

Thanks for the confirmation. I'll make the introduction to my colleagues that support the summit as soon we receive the marketing authorization doc. (pre-req).

Thanks,  
[REDACTED]

On 3/6/17, 8:24 AM, "[REDACTED]" <[REDACTED]@co.washington.or.us> wrote:

Yes, I am approved to participate in the summit

Sorry it took so long to reply, I was out sick Friday.

-----Original Message-----

**From:** [REDACTED] [mailto:[REDACTED]@amazon.com]  
**Sent:** Friday, March 03, 2017 3:53 PM  
**To:** [REDACTED]  
**Subject:** Re: update

Just to confirm, does that also mean that you are approved for participate in the Summit?

Thanks,  
[REDACTED]

[REDACTED]  
Sr. Business Development Manager  
[REDACTED]@amazon.com

Amazon Rekognition:  
<https://aws.amazon.com/rekognition/>

On 3/3/17, 3:39 PM, "[REDACTED]" <[REDACTED]@co.washington.or.us> wrote:

The Undersheriff just informed me that he is OK with signing the Customer Release, and so we will get a scanned copy to you ASAP (probably Monday) and so we will be good to move forward on that.

Thanks for your patience  
[REDACTED]

---

**From:** [REDACTED] [mailto:[REDACTED]@amazon.com]  
**Sent:** Friday, March 03, 2017 10:46 AM  
**To:** [REDACTED]

Subject: Re: update

I'm setting expectations for a confirmation by next week. The person with the release forms, etc., is out today, so I'll get that to you on Monday.

Thanks,

██████████

On 3/3/17, 6:31 AM, "██████████" <██████████@co.washington.or.us> wrote:

He should be back sometime next week, I am still pushing the Undersheriff to see if we can get it done sooner.

Shoot me over both the forms and I can at least sign the filming release for myself.

Thanks,

██████████

---

From: ██████████ ██████████@amazon.com]

Sent: Thursday, March 02, 2017 5:31 PM

To: ██████████

Subject: Re: update

I'm glad to hear that it is that close. When do you expect the sheriff back?

We'll need 1) the customer reference doc, and 2) if you are on stage/participating in a presentation at the Public Sector Summit, filming release.

I'll confirm with the coordinator (and see about getting a copy of the release to be safe).

Thanks,

██████████

On 3/2/17, 3:56 PM, ██████████ <██████████@co.washington.or.us> wrote:

I am 90% sure I am going to get it signed, but the Sheriff is out of town on some last minute family business and the Undersheriff is reluctant to sign anything in his absence.

Just to make sure, the only thing holding this up is the Customer Reference being signed, right? I will keep the pressure up over here.

I really don't want to miss out on this opportunity so let me know what if there is anything else I need to do aside from that form, I will get everything done I can.

Thanks,

██████████

-----Original Message-----

From: ██████████ [mailto:██████████@amazon.com]

Sent: Thursday, March 02, 2017 3:13 PM

To: ██████████

Subject: Re: update

█,

I'm under pressure to finalize the Summit participation slot. Where are things at on your side?

Thanks,

█

On 2/28/17, 8:12 AM, "█" <█@co.washington.or.us> wrote:

█

I would be totally fine to touch base with the customers. The Sheriff is totally fine with us sharing about it, he was just being hesitant about appearing to be "in bed" with big data. I am bringing him around, but he was never against sharing the experience with other people.

I anticipate we can get the paperwork done this week, and hopefully that isn't too late to move forward.

Thanks,

█

-----Original Message-----

From: █ [mailto:rrcm@amazon.com]

Sent: Monday, February 27, 2017 10:35 PM

To: █

Subject: Re: update

Hi █

Thanks for the update. I've let our coordinator know that you are still trying to make this happen. I hope that it pans out.

Btw, there are "public sector" partners and customers that would like to touch base with you at some point. Let me know if you would be interested in such discussions.

Thanks,

█

On 2/27/17, 11:04 AM, "█" <█@co.washington.or.us> wrote:

I am still working on getting the approval needed. I really want to participate at the summit, so I am going to push for that this week and see if we can get that going.

-----Original Message-----

From: █ [mailto:█@amazon.com]

Sent: Thursday, February 23, 2017 11:47 AM

To: █

Subject: update

Thanks, █ I've also asked our Marketing and PR teams to think through the perspective of your exec team. We also need to be mindful of similar perceptions wrt such use cases.

I'll let you know when there are developments on that.

The Public Sector Summit coordinator advised me that we would need a signed release for filming in order for you to participate in a presentation:

"As an aside, irrespective of the all-up Reference status, if they would like to present at the PS Summit, they will need to sign a release form for the presentation and material/content to be shared/recorded. If this going to be an issue, we will need to know sooner rather than later."

Do you think that participating at the summit / signing a release are still possible? (Let's leave the NDA out of it for now.)

Thanks,

█

On 2/23/17, 11:31 AM, "█" <█@co.washington.or.us> wrote:

Just wanted to send a quick not to let you know that I am still working on things here. It might move slow here, but getting things going is part of my job, so hopefully I will have good news soon.

-----Original Message-----

From: █ [mailto:█@amazon.com]

Sent: Wednesday, February 15, 2017 4:11 PM

To: █

Subject: Re: Blog / Video formats

Hi █

Thanks for the update. Although disappointing, I can appreciate the concerns and the need to be thoughtful as we move forward.

Let me think and discuss internally. I'll get back with you soon.

Thanks,

█

On 2/15/17, 3:49 PM, "█" <█@co.washington.or.us> wrote:

I just got done with the Executive staff meeting. There were some concerns from the staff and they are being a little more cautious than I expected.

For the NDA, County Counsel was concerned about public records requests. Since all communications in and out of the Sheriff's office (and county for that matter) are subject to public records requests, he needs to determine what we can legally redact or omit entirely when it comes to communications covered by an NDA. We want to make sure if someone, somehow requested all communication relating to AWS from the county, we could satisfy both the Freedom of Information Act and our NDA with you. I will keep you informed about his findings.

For the Customer Reference, they also showed some concerns to me. These revolved around public perception. Even though our software is being used to identify persons of interest from images provided to the SO, the perception might be that we are constantly checking faces from everything, kind of a Big Brother vibe. They are

concerned that ACLU might consider this the government getting in bed with big data. What they want to do is get more happy examples of the good the software is doing. We have a couple now, but they want some more.

I know this is bad news, but I think they will eventually get around to the signing them, but as far as when, I am not sure. I will keep you updated as I get information, and I will continue to advocate for them with the Executive Staff.

Thanks,

██████████

-----Original Message-----

From: ██████████ [mailto:██████████@amazon.com]

Sent: Wednesday, February 15, 2017 12:26 PM

To: ██████████

Subject: Re: Blog / Video formats

Hi ██████████

Let me know when you get the marketing (customer ref) doc and NDA signed. (Still on for today?)

I'll forward what you've already provided to the appropriate folks to get things started.

Thanks,

██████████

Sent from my iPhone

> On Feb 14, 2017, at 10:29 AM, ██████████ <██████████@co.washington.or.us> wrote:

>

> ██████████

> I think we could be ready to write a post as soon as I get our executive staff to sign that agreement and NDA. We have some good examples and since I am about to release the software to the deputies I am pretty close to being done with development of v1.0. If we wanted to start working before those documents are signed by county council I could, just let me know if that is how we want to proceed.

>

> As far as video, we are still shopping for body worn cameras, but we have a request that videos be exported as MP4, AVI or MPEG. Surveillance videos are another monster all together. There are hundreds of capture and storage vendors out there, and it seems like every single one has their own codec and compression method. Typically we get the videos in their proprietary format and we have to use their software to view it. Mostly we take screen shots while the video is playing. When we do convert them we usually put them directly on to DVDs to play in court on a DVD player. Not sure if that format is easy to consume on your end.

>

> Thanks,

> ██████████

>

> -----Original Message-----

> From: ██████████ [mailto:██████████@amazon.com]


> Sent: Tuesday, February 14, 2017 10:03 AM

> To: ██████████

> Subject: Blog / Video formats

>

> Hi ██████████

>  
> I've put in a request with my colleague that runs AWS blogs, including the newly launched AI blog, re: blog writing help. His reply:  
>  
> "Absolutely! Once he's ready to write the blog post, he'll get a lot of help and guidance, and the final product will be fantastic. As soon as you think he's ready to write, just let me know and I'll get him started."  
>  
> Another colleague is researching video formats that we should consider for input, (if we were to include video ingestion in a future product). Let me know if you have suggestions based on the video that your team works with.  
>  
> Thanks,  
>   
>  
>  
> Sent from my iPhone

Cc: [REDACTED]  
Subject: Re: Washington County Sheriff's Office / AWS AI blog

[REDACTED],  
Looks like a great start to the blog. I'll try to get with Andy tomorrow.  
What can you tell me about:

- i. Real World Example
  - a. Lowes/Facebook guy
  - b. Dollar bill guy
  - c. Credit Card Fraud guy

These kind of stories are great.

Thanks,  
[REDACTED]

---

**From:** [REDACTED] <[REDACTED]@co.washington.or.us>  
**Date:** Monday, March 20, 2017 at 2:54 PM  
**To:** "[REDACTED]" <[REDACTED]@amazon.com>, "[REDACTED]" <[REDACTED]@amazon.com>  
**Cc:** "[REDACTED]" <[REDACTED]@amazon.com>, "[REDACTED]" <[REDACTED]@amazon.com>  
**Subject:** RE: Washington County Sheriff's Office / AWS AI blog

[REDACTED]  
Sorry this took so long. Here is the answer to those question. Let me know what the next steps are:

**Title:** Using AWS Rekognition to identify unknown crime suspects

**Submit Draft:** Depending on approval from command staff – May 15 – June 15

### Outline

- i. Facial Recognition solves a problem of memory and logistics
  - a. Identifying suspects in surveillance video/photos relies on first hand knowledge from law enforcement professionals
  - b. Over 300,000 bookings in 15 years and deputy attrition lead to lack of complete coverage
  - c. Fast moving investigations and works schedules render deputy based identification unreliable
- ii. Setup
  - a. Gather mugshots
    - i. Used all mugshots since 2001 since that is as far back as our system has them in formats that we can use SQL to query
    - ii. Ensure only front view is uploaded
      - 1. Exclude tattoos
      - 2. Exclude side shots
    - iii. Name all image files with unique identifier
      - 1. Our case used booking number – a 1-to-1 relationship with each time someone is booked into the jail. Inmates may have multiple bookings
  - b. Upload to S3
    - i. Used script to move images into folders

- ii. Manually uploaded to S3
    - 1. I would have preferred a script here, however, I didn't because of lack of experience at the time.
      - a. Possible script to upload to S3
  - c. Script to index images with Rekognition
    - i. Looped through all images in a bucket
    - ii. Indexed image
    - iii. Share script
  - d. Testing
    - i. Use cases
      - 1. Booking Photo
        - a. Used a booking photo to ensure that inmates booking photos were returned
      - 2. Images of known inmate
        - a. Take image of known inmate to ensure their booking photo is returned
          - i. Example  
████████████████████
      - 3. Unknown subject images
        - a. Use 10 images of unknown people and pass results to investigations
        - b. Investigations verifies identities of people
- iii. Execution
  - a. Hurdle: Current website uses Cold Fusion
    - i. Unable to install software that currently has SDK
    - ii. Using secondary server to make Rekognition calls
  - b. Passing Data from Rekognition result to get all information about inmate
- iv. Mobile App
  - a. Using Rekognition in iOS to create quick app with Swift
  - b. Share examples of integration
- v. Real World Example
  - a. Lowes/Facebook guy
  - b. Dollar bill guy
  - c. Credit Card Fraud guy

---

**From:** ██████████ [mailto:██████████@amazon.com]  
**Sent:** Tuesday, March 07, 2017 7:22 PM  
**To:** ██████████  
**Cc:** ██████████; ██████████  
**Subject:** RE: Washington County Sheriff's Office / AWS AI blog

Thanks for the introduction ██████████ and great to meet you ██████████! Thanks for your interest in publishing on the AWS AI Blog. I think ██████████ has given you all the information below that you'll need to get started.

Please take a look at the guidelines he provided, and then respond to me with answers to the three questions. Once I hear back from you, I'll have the information I need to help you move forward.

Looking forward to it!

Best,

██████████



---

**From:** [REDACTED]  
**Sent:** Monday, March 06, 2017 10:13 AM  
**To:** [REDACTED] <[REDACTED]@co.washington.or.us>; [REDACTED] <[REDACTED]@amazon.com>  
**Cc:** [REDACTED] <[REDACTED]@amazon.com>; [REDACTED] <[REDACTED]@amazon.com>  
**Subject:** Re: Washington County Sheriff's Office / AWS AI blog

Hi [REDACTED]

I've pasted some guidance on AI blog that should help you get started, give you an idea. Andy will chime in with more specifics.

[REDACTED]

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### Content

We ask that customers show **how** they implemented their solution and show readers how to do something similar themselves. These customer posts (for the Big Data Blog) by [Nasdaq](#), [FireEye](#) and [Coursera](#) are great examples.

### Audiences

For this post, I see your audiences as application developers, solutions architects, and professional services consultants. They are looking for guidance on integrating AI services into their applications—in this case, Rekognition. In addition to understanding how you implemented the solution (steps/sample code/diagrams), they'd like to understand the overhead required to convert the sample solution to a production solution, learn any best practices that you'd recommend, and learn about any operational and scaling implications.

### Getting started

To get started, would you mind answering the questions below? Your responses help us provide you with any guidance we might have before you begin writing.

- What is your blog post's title?
- What is the top-level outline of your post? (Roman numerals are ideal)
- By what date can you submit your draft for review?

[REDACTED]  
Sr. Business Development Manager  
[REDACTED]@amazon.com

Amazon Rekognition:  
<https://aws.amazon.com/rekognition/>

---

**From:** [REDACTED] <[REDACTED]@co.washington.or.us>  
**Date:** Monday, March 6, 2017 at 8:30 AM  
**To:** [REDACTED] <[REDACTED]@amazon.com>  
**Cc:** [REDACTED] <[REDACTED]@amazon.com>, [REDACTED] <[REDACTED]@amazon.com>, [REDACTED] <[REDACTED]@amazon.com>  
**Subject:** RE: Washington County Sheriff's Office / AWS AI blog

Hello [REDACTED]

I have a fairly open schedule. Not sure how you want to do the discussion (email, phone, etc...) but let me know and we can set up the time.

Thanks,

██████████

---

**From:** ██████████ [mailto:██████████@amazon.com]  
**Sent:** Friday, March 03, 2017 7:30 PM  
**To:** ██████████  
**Cc:** ██████████; ██████████  
**Subject:** Washington County Sheriff's Office / AWS AI blog

Hi ██████████

We're excited to have WCSO's deep-dive post on the newly launched [AWS AI blog](#).

I wanted to introduce you to ██████████, Program Manager for AI blog. Andy's an expert on tech blogs so I've asked him to help get you started and provide you with guidance for a deep-dive technical post—when convenient for you. It's a great opportunity to tell the tech world all about what you've built.

██████████ will cc me to keep me in the loop.

Thanks,

██████████

[REDACTED]

---

**From:** [REDACTED] <[REDACTED]@amazon.com>  
**Sent:** Friday, May 5, 2017 10:55 AM  
**To:** [REDACTED]  
**Subject:** Re: PS Summit in DC / WCSO - Introduction

SF Summit PPT as a reference:

[https://www.slideshare.net/AmazonWebServices/bda-301-an-introduction-to-amazon-rekognition-for-deep-learningbased-computer-vision?qid=0cbaa358-814a-4dc2-ba28-9b4c9400cb31&v=&b=&from\\_search=1](https://www.slideshare.net/AmazonWebServices/bda-301-an-introduction-to-amazon-rekognition-for-deep-learningbased-computer-vision?qid=0cbaa358-814a-4dc2-ba28-9b4c9400cb31&v=&b=&from_search=1)

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**From:** [REDACTED] <[REDACTED]@amazon.com>  
**Date:** Thursday, May 4, 2017 at 1:33 AM  
**To:** [REDACTED] <[REDACTED]@amazon.com>, [REDACTED] <[REDACTED]@co.washington.or.us>  
**Cc:** [REDACTED] <[REDACTED]@amazon.com>, [REDACTED] <[REDACTED]@amazon.com>, [REDACTED] <[REDACTED]@amazon.com>  
**Subject:** Re: PS Summit in DC / WCSO - Introduction

I'll forward you the invite, we are planning on meeting tomorrow.

Thanks,  
[REDACTED]

-----  
Thoughts on our interaction? Provide feedback [here](#)

---

**From:** [REDACTED] <[REDACTED]@amazon.com>  
**Date:** Wednesday, May 3, 2017 at 10:29 PM  
**To:** [REDACTED] <[REDACTED]@co.washington.or.us>, [REDACTED] <[REDACTED]@amazon.com>  
**Cc:** [REDACTED] <[REDACTED]@amazon.com>, [REDACTED] <[REDACTED]@amazon.com>, [REDACTED] <[REDACTED]@amazon.com>  
**Subject:** Re: PS Summit in DC / WCSO - Introduction

Hey [REDACTED] – Hope you're doing well. We haven't forgotten about your feedback and requests. We'll have some updates for you by summer.

Hi [REDACTED] – I'm happy to join the call, if I'm available when you guys connect.

Thanks,  
[REDACTED]

[REDACTED]  
Sr. Business Development Manager

[REDACTED]

---

**From:** [REDACTED] <[REDACTED]@amazon.com>  
**Sent:** Monday, April 3, 2017 10:44 AM  
**To:** [REDACTED]  
**Subject:** Re: Would you like to share your Rekognition use case at the next Portland AWS Meetup?

[REDACTED],

I like the approach. You are telling a compelling story that includes specific metrics—hours saved, speed to identification/capture, number of faces compared, etc. The example of the robbery suspect that was identified and caught using the system certainly resonates also.

Thanks!

Regards,

[REDACTED] - Account Executive, Oregon  
[REDACTED] | [REDACTED] | [REDACTED]@amazon.com  
[Leave Anytime Feedback On My Performance](#)



[Join us for the Portland AWS Meetup on April 12](#)  
[Join us at the AWS SF Summit – April 18-19](#)

---

**From:** [REDACTED] <[REDACTED]@co.washington.or.us>  
**Date:** Monday, April 3, 2017 at 10:30 AM  
**To:** [REDACTED] <[REDACTED]@amazon.com>, [REDACTED] <[REDACTED]@amazon.com>  
**Subject:** RE: Would you like to share your Rekognition use case at the next Portland AWS Meetup?

I like the document. We could do it without slides too and I can just speak anecdotally about the real world examples. I think saying that we were able to go from surveillance to Rekognition to Facebook to positively id the suspect, and all within minutes doesn't require the images to be shown.

With the value proposition works great for a general audience, I may want to touch on how hours worked is exponential as we get farther away from the crime, so that 200 workdays is only the directly measurable metric. Unmeasurable is the number of days it takes to track down the suspect and the stolen goods when the suspect has enough time to get rid of the goods.

-----Original Message-----

**From:** [REDACTED] [mailto:[REDACTED]@amazon.com]  
**Sent:** Monday, April 03, 2017 10:20 AM  
**To:** [REDACTED]  
**Subject:** Re: Would you like to share your Rekognition use case at the next Portland AWS Meetup?

---

**From:** [REDACTED] <[REDACTED]@amazon.com>  
**Sent:** Wednesday, June 14, 2017 2:09 PM  
**To:** [REDACTED]  
**Cc:** [REDACTED]  
**Subject:** Re: Best of luck!

[REDACTED]

Sounds good to me! The squeaky wheel gets the NDA.

Regards,

[REDACTED] - Account Executive, Oregon  
**O:** [REDACTED] | **C:** [REDACTED] | [REDACTED]@amazon.com  
[Leave Anytime Feedback On My Performance](#)



On Jun 14, 2017, at 1:08 PM, [REDACTED] <[REDACTED]@co.washington.or.us> wrote:

Send it again, and at the same time send me and that person an email, that way I can ask daily on the progress. Our org isn't the best on reading every email, or asking questions when they don't understand. So if we both send it and create the email thread I can use that as a point to bug them

---

**From:** [REDACTED] [REDACTED]@amazon.com]  
**Sent:** Wednesday, June 14, 2017 12:41 PM  
**To:** [REDACTED] [REDACTED]  
**Subject:** Re: Best of luck!

[REDACTED]

Awesome, great to hear! I had high confidence that it would be a great presentation.

I sent an NDA package to your central office and it expired since nobody signed it. That's the second time it's happened. ( I am happy to request another one, but what do you suggest we do differently this time around? Can we get a pre-commitment from the recipient that they will sign it before I generate another one?

Regards,

[REDACTED] - Account Executive, Oregon  
**O:** [REDACTED] | **C:** [REDACTED] | [REDACTED]@amazon.com  
Leave Anytime Feedback On My Performance <[https://pages.awscloud.com/anytime-feedback.html?awsrep=\[REDACTED\]@amazon.com&awsteam=AMER-ISR-Customer-Feedback@Amazon.com](https://pages.awscloud.com/anytime-feedback.html?awsrep=[REDACTED]@amazon.com&awsteam=AMER-ISR-Customer-Feedback@Amazon.com)>

<<https://aws.amazon.com/>>

Join us at the next Portland AWS Meetup – June 14 <<https://www.meetup.com/AWS-Portland/events/240193436/>>

On 6/14/17, 12:25 PM, "[REDACTED]" <[REDACTED]@co.washington.or.us> wrote:

Thanks for the luck, the presentation went great. Lots of questions, lots of interest.

I can't remember which [REDACTED] I was working with (so I included you both) on getting an NDA to get the insight into the Rekognition roadmap. I know that it stalled on our end, but I wanted to revisit it and get the pressure back on.

Last I recall our county counsel pointed us to someone else in our county to get the NDA signed. Can we revive that and get it done (I will keep the pressure, even if I have to stand over someone's shoulder) because I know that there are somethings coming up that I will care about.

Thanks,

[REDACTED]

---

From: [REDACTED] [REDACTED]@amazon.com]

Sent: Monday, June 12, 2017 5:53 PM

To: [REDACTED]

Subject: Best of luck!

Hi [REDACTED]

The team is very excited to have you present at the summit. Great job on the deck and AI blog. There is already a lot of interest.

Thanks,

[REDACTED]

[REDACTED]

Sr. Business Development Manager  
AWS AI Services - Amazon Rekognition

[REDACTED]

[REDACTED]

---

**From:** [REDACTED]  
**Sent:** Thursday, June 15, 2017 2:18 PM  
**To:** [REDACTED]  
**Subject:** RE: PS Summit in DC / WCSO - AI blog deadline

Thanks, that was quick

I think everything is good now, just the one reference.

---

**From:** [REDACTED] [REDACTED]@amazon.com]  
**Sent:** Thursday, June 15, 2017 2:13 PM  
**To:** [REDACTED]  
**Subject:** RE: PS Summit in DC / WCSO - AI blog deadline

Updated. Is it just the one example?

-----Original Message-----  
**From:** [REDACTED] [mailto:[REDACTED]@co.washington.or.us]  
**Sent:** Thursday, June 15, 2017 2:11 PM  
**To:** [REDACTED] <[REDACTED]@amazon.com>  
**Subject:** RE: PS Summit in DC / WCSO - AI blog deadline

Really small but important. Can you make all references say Washington County Sheriff's Office, and not department?

It is a point of pride, Offices are elected, Departments are appointed.

---

**From:** [REDACTED] [REDACTED]@amazon.com]  
**Sent:** Thursday, June 15, 2017 1:54 PM  
**To:** [REDACTED]  
**Subject:** RE: PS Summit in DC / WCSO - AI blog deadline

[REDACTED] -

Your post is now published. I'm going to send a more official email shortly, but I wanted to give you the heads up that it's out there.

<https://aws.amazon.com/blogs/ai/using-amazon-rekognition-to-identify-persons-of-interest-for-law-enforcement/>

We made a few minor edits based on feedback from PR and AWS leadership. You will see it in the examples at the end. Let me know if you want to change anything at this point.

Thanks again for working on this. I know that you've had a busy week.

[REDACTED]

-----Original Message-----

From: [REDACTED] [mailto:[REDACTED]@co.washington.or.us]  
Sent: Wednesday, June 14, 2017 12:19 PM  
To: [REDACTED] <[REDACTED]@amazon.com>  
Subject: RE: PS Summit in DC / WCSO - AI blog deadline

Yes, finished about an hour ago. It went great, lots of questions, lots of interest

---

From: [REDACTED] [mailto:[REDACTED]@amazon.com]  
Sent: Wednesday, June 14, 2017 12:17 PM  
To: [REDACTED]  
Subject: RE: PS Summit in DC / WCSO - AI blog deadline

Awesome. We have one last check through public relations and then we're clear to hit publish. You're faster than most to respond - this is a good thing.

You've presented already, right?

[REDACTED]

-----Original Message-----

From: [REDACTED] [mailto:[REDACTED]@co.washington.or.us]  
Sent: Wednesday, June 14, 2017 12:15 PM  
To: [REDACTED] <[REDACTED]@amazon.com>  
Subject: RE: PS Summit in DC / WCSO - AI blog deadline

This looks good to me.

I am sad to lose the lone wolf feel because I think it played better to think a single dev could do all this in such short time. Not to mention I like all the credit. But I totally understand that we get more credibility if it comes from a group and not just one guy.

Everything looks great. I am really excited to get this published

[REDACTED]

---

From: [REDACTED] [mailto:[REDACTED]@amazon.com]  
Sent: Wednesday, June 14, 2017 11:48 AM  
To: [REDACTED]  
Subject: RE: PS Summit in DC / WCSO - AI blog deadline

[REDACTED] -

Final version (I hope).

A couple of minor changes. We shifted the narrative voice within the walk-through from I to We. This was at the request of the account team that didn't want to make it sound you're a lone wolf programmer working on AWS (it might be true, but that's not the impression they want). That way the solution is developed by your organization. The introduction and conclusion are very much you.



We swapped out the sentence about 3 days feeling like years. Our service team was feeling very uncomfortable not knowing more about why it took that long.

Please see the attached screenshot. Read through it and let me know if there's anything else you want to update. Otherwise, we're just about ready to publish.

Thanks again.

-----Original Message-----

From: [REDACTED] [mailto:[REDACTED]@co.washington.or.us]  
Sent: Tuesday, June 13, 2017 4:41 PM  
To: [REDACTED] <[REDACTED]@amazon.com>  
Subject: RE: PS Summit in DC / WCSO - AI blog deadline

[REDACTED]  
I just sent you the updated file, it was 9mb, and I am not sure our mail server will send it. Please let me know if you did or didn't get it within the next couple of minutes and I will get a drop box link instead.

Thanks,

[REDACTED]  
-----  
From: [REDACTED]  
Sent: Tuesday, June 13, 2017 4:38 PM  
To: [REDACTED]  
Subject: RE: PS Summit in DC / WCSO - AI blog deadline

Here is the update. For any comments or changes that I made you will see my Wife's name [REDACTED], for some reason she has Word set up as her on my laptop.

Also, I may have missed accepting a comma or period here or there, just assume I accept them.

[REDACTED]  
-----  
From: [REDACTED] [mailto:[REDACTED]@amazon.com]  
Sent: Tuesday, June 13, 2017 3:32 PM  
To: [REDACTED]  
Subject: RE: PS Summit in DC / WCSO - AI blog deadline

[REDACTED] -  
Okay - final edits from our tech editing team. Thank you for working with us.

There are edits, then there are questions or comments. Please accept changes and consider any questions. You don't need to take every suggestion in the comments. Some are just suggestions. Other things can be useful.

Once we've reached agreement, I'll stage this post up and get it ready for publication.

Thanks again,

██████████

-----Original Message-----

From: ██████████ [mailto:██████████@co.washington.or.us]  
Sent: Tuesday, June 13, 2017 6:37 AM  
To: ██████████ <██████████@amazon.com>  
Subject: RE: PS Summit in DC / WCSO - AI blog deadline

Here is the file with the 2 added examples \_\_\_\_\_

From: ██████████  
Sent: Monday, June 12, 2017 5:06 PM  
To: ██████████  
Subject: RE: PS Summit in DC / WCSO - AI blog deadline

Yeah I can add another example or two the only problem and the reason why I remove them was because I felt without the pictures it really wasn't a good story considering we're talking about just somebody who was a person of interest and we found them and the other person was a credit card thief and we found them .

---

From: ██████████ ██████████@amazon.com]  
Sent: Monday, June 12, 2017 2:45 PM  
To: ██████████  
Subject: RE: PS Summit in DC / WCSO - AI blog deadline

██████████ -

A quick status. Our Rekognition team has signed-off on the post. There are a couple minor comments. I'm sending it to tech edit now. They won't remove your voice from the post, but they will check for grammar, typos, trademark questions, and other details just in case any of us missed them.

One request - would it be possible to add a second example at the end? You build this great technology story, then you give the one example. If I recall, you had three examples in the original draft. Another example I think would be great. Then, it goes to conclusion.

██████████

From: ██████████ [mailto:██████████@co.washington.or.us]  
Sent: Sunday, June 11, 2017 5:56 AM  
To: ██████████ <██████████@amazon.com>  
Subject: RE: PS Summit in DC / WCSO - AI blog deadline

██████████

I resolved all the issues you mentioned, and I also incorporated some changes (mostly grammatical) that my Public Affairs officer suggested.

Thanks,  
██████████

---

From: [REDACTED] [REDACTED]@amazon.com]  
Sent: Saturday, June 10, 2017 7:35 PM  
To: [REDACTED]  
Subject: RE: PS Summit in DC / WCSO - AI blog deadline [REDACTED] -

I value your time and I don't want to go back and forth too much. I have a document now with some feedback from our product team. One note not in the comments of the doc, let's move the architecture diagram to the end of the introduction. Other than that, you should be able to see the comments. There aren't many. To be honest, I expect one more round of edits after this one.

Thanks again,

[REDACTED]

From: [REDACTED] [mailto:[REDACTED]@co.washington.or.us]  
Sent: Monday, June 05, 2017 11:37 AM  
To: [REDACTED] <[REDACTED]@amazon.com><mailto:[REDACTED]@amazon.com>>  
Subject: RE: PS Summit in DC / WCSO - AI blog deadline

Yes, I am Wednesday, I don't remember the exact time, but I would like it to be up then too

From: [REDACTED] [mailto:[REDACTED]@amazon.com]  
Sent: Monday, June 05, 2017 11:32 AM  
To: [REDACTED]  
Subject: RE: PS Summit in DC / WCSO - AI blog deadline

Got it. I will forward this along for reviews and send you feedback once it's all come together.

Are you presenting on Wednesday next week? I'd like this to be live before you go onstage if at all possible.

[REDACTED]

From: [REDACTED] [mailto:[REDACTED]@co.washington.or.us]  
Sent: Monday, June 05, 2017 11:21 AM  
To: [REDACTED] <[REDACTED]@amazon.com><mailto:[REDACTED]@amazon.com>>  
Subject: RE: PS Summit in DC / WCSO - AI blog deadline

Yup, totally missed it.

Sorry it has been a busy morning

From: [REDACTED] [mailto:[REDACTED]@amazon.com]  
Sent: Monday, June 05, 2017 11:20 AM  
To: [REDACTED]  
Subject: RE: PS Summit in DC / WCSO - AI blog deadline

[REDACTED] -

I think you may have missed the attachment. Please send again.

Thank you.

██████████  
  
From: ██████████ [mailto:██████████@co.washington.or.us]  
Sent: Monday, June 05, 2017 11:12 AM  
To: ██████████ <██████████@amazon.com><mailto:██████████@amazon.com>>  
Subject: RE: PS Summit in DC / WCSO - AI blog deadline

██████████  
Here is the updated blog post. I enabled change tracking so we can keep a history of any edits we want to make.

Let me know what we want to do next.

Thanks,

██████████  
  
From: ██████████ [mailto:██████████@amazon.com]  
Sent: Monday, June 05, 2017 9:36 AM  
To: ██████████  
Subject: RE: PS Summit in DC / WCSO - AI blog deadline

██████████ -  
You can find the service logos and example usages on this page. The first downloadable powerpoint is particularly useful:

<https://aws.amazon.com/architecture/icons/>

██████████  
  
From: ██████████ [mailto:██████████@co.washington.or.us]  
Sent: Monday, June 05, 2017 9:32 AM  
To: ██████████ <██████████@amazon.com><mailto:██████████@amazon.com>>  
Subject: RE: PS Summit in DC / WCSO - AI blog deadline

I am working on the improvements and should have those to you very quickly. For the architecture diagram, do you guys have an image repository for all the service logos? I want to make sure it is accurate and looks good.

Thanks,

██████████  
  
From: ██████████ [mailto:██████████@amazon.com]  
Sent: Monday, June 05, 2017 8:34 AM  
To: ██████████

Subject: RE: PS Summit in DC / WCSO - AI blog deadline

██████ -

I just now realized that the email I sent on Friday arrived in your inbox today. Sorry about the delay there.

Here are two examples of a customer posts:

<https://aws.amazon.com/blogs/ai/powering-language-learning-on-duolingo-with-amazon-polly/>

<https://aws.amazon.com/blogs/big-data/how-smartnews-built-a-lambda-architecture-on-aws-to-analyze-customer-behavior-and-recommend-content/>

Here's what I recommend.

1. Add a summary paragraph at the closing of your introduction that begins, "In this post ..." that describes what's to come. The Duolingo example has one.
2. Break up the narrative using headers. Introduction, Architecture, Examples, Summary
3. Remove the images and be a bit more descriptive. I don't think you have to do too much, but a little more would be good.
4. Add a summary to wrap it up.

Once that's done, I'll move this to our primary review to get it pushed through our process. It'll be reviewed by one of my stakeholders, the service teams involved, and tech editors. My goal is to publish at the end of this week or early next week with AWS Public Sector.

And while I think your post is absolutely heading in the right direction and your natural tone is good, I've attached our internal writing guidelines so that you know what we typically look at.

Thanks again,

██████

From: ████████ [mailto:██████@co.washington.or.us]

Sent: Monday, June 05, 2017 8:07 AM

To: ████████ <██████@amazon.com><mailto:██████@amazon.com>>

Subject: RE: PS Summit in DC / WCSO - AI blog deadline

That could be something I could do. Could you send me an example? Just so I see what to aim for?

Thanks,

■

P.S. Without the images, do we feel the examples would be too short? Should I remove them and be a little more descriptive?

From: ■ [mailto:■@amazon.com]  
Sent: Monday, June 05, 2017 8:04 AM  
To: ■  
Subject: RE: PS Summit in DC / WCSO - AI blog deadline

■ -

This is a great start. I'll go through it this weekend and make a few suggestions.

Internally, I think that we're looking to remove the individual photos from your use cases. While it really makes it compelling, our PR and product teams did not feel comfortable with the images in the post. But, even without those images, the post is compelling.

Most of our posts have some sort of architecture diagram showing what services are involved and how they're connected. Is this something that you could put together?

Thanks again.

■

From: ■ [mailto:■@co.washington.or.us]  
Sent: Friday, June 02, 2017 3:48 PM  
To: ■ <■@amazon.com><mailto:■@amazon.com>>  
Subject: RE: PS Summit in DC / WCSO - AI blog deadline

Attached is a pretty good rough draft.

Let me know what to do next and we can see if we can get this up soon.

Thanks,

■

From: ■ [mailto:■@amazon.com]  
Sent: Friday, June 02, 2017 1:23 PM  
To: ■  
Subject: RE: PS Summit in DC / WCSO - AI blog deadline

Thank you. And let me know if you want any customer post examples or other guidance at this point. I can pull together resources as needed.

■

From: [redacted] [mailto:[redacted]@co.washington.or.us]  
Sent: Friday, June 02, 2017 1:21 PM  
To: [redacted] <[redacted]@amazon.com<mailto:[redacted]@amazon.com>>  
Subject: RE: PS Summit in DC / WCSO - AI blog deadline

[redacted]

Let me see what I can get together by the end of the day.

Thanks,

[redacted]

From: [redacted] [mailto:[redacted]@amazon.com]  
Sent: Friday, June 02, 2017 1:12 PM  
To: [redacted]  
Subject: FW: PS Summit in DC / WCSO - AI blog deadline

[redacted] -

I know that you're busy, and we're heading toward PS Summit. Can you forward me the most recent draft of this post as you had it written once upon a time?

If you have any questions, please feel free to ask.

Thank you,

[redacted]

From: [redacted]  
Sent: Tuesday, May 09, 2017 10:15 AM  
To: [redacted] <[redacted]@co.washington.or.us<mailto:[redacted]@co.washington.or.us>>; [redacted] <[redacted]@amazon.com<mailto:[redacted]@amazon.com>>  
Cc: [redacted] <[redacted]@amazon.com<mailto:[redacted]@amazon.com>>; [redacted] <[redacted]@amazon.com<mailto:[redacted]@amazon.com>>; [redacted] <[redacted]@amazon.com<mailto:[redacted]@amazon.com>>; [redacted] <[redacted]@amazon.com<mailto:[redacted]@amazon.com>>  
Subject: Re: PS Summit in DC / WCSO - AI blog deadline

Hi [redacted]

For max impact, we'll want the AI blog post to coincide with the PS Summit. [redacted] who works with [redacted] on the AI/ML blogs, will take the lead so that we get this in time.

[redacted] [redacted] and [redacted] were working together so please connect with [redacted] on the current status. [redacted] is quite busy with his day job, so he'll appreciate all the help you can provide to guide him through the process. I'll leave it to you to connect with [redacted] after you have the latest from [redacted]

Thanks,

[redacted]

From: [REDACTED] <[REDACTED]@co.washington.or.us<mailto:[REDACTED]@co.washington.or.us>>  
Date: Tuesday, May 2, 2017 at 7:55 AM  
To: '[REDACTED] <[REDACTED]@amazon.com<mailto:[REDACTED]@amazon.com>>, [REDACTED] <[REDACTED]@amazon.com<mailto:[REDACTED]@amazon.com>>  
Cc: [REDACTED] <[REDACTED]@amazon.com<mailto:[REDACTED]@amazon.com>>, [REDACTED] <[REDACTED]@amazon.com<mailto:[REDACTED]@amazon.com>>, [REDACTED] <[REDACTED]@amazon.com<mailto:[REDACTED]@amazon.com>>  
Subject: RE: PS Summit in DC / WCSO - Introduction

I am pretty free everyday except Thursday. I am on Pacific time so basically any time after 8 am PST.

Thanks,

From: [REDACTED] [mailto:[REDACTED]@amazon.com]  
Sent: Tuesday, May 02, 2017 5:58 AM  
To: [REDACTED]  
Cc: [REDACTED]  
Subject: Re: PS Summit in DC / WCSO - Introduction

Great meeting you [REDACTED].

Thanks you very much for co-presenting at the summit.  
<https://aws.amazon.com/summits/washington-dc/>

The current thought of the session would be we would present on the high level AI services (Rekogntion, Polly, and Lex) and then shift over to your use case.

Do you have time later this week for a quick call to discuss the details/schedule/etc...?

Thanks,

-----  
Thoughts on our interaction? Provide feedback here<[https://www.amazon.com/gp/f.html?C=1NT0KFZLSYPFT&R=2STPU5BUFHTYZ&T=C&U=https%3A%2F%2Ffeedback.aws.amazon.com%2F%3Ffea%3Dsnivelyb%26fn%3D%26%3D%26ref\\_%3Dpe\\_2509520\\_187842410&A=ZYD1FRECGO2IBMMOVFUA7DME7NQA&H=G1CTV8AWIR8YG795PJ9NP2M0FJCA&ref\\_=pe\\_2509520\\_187842410](https://www.amazon.com/gp/f.html?C=1NT0KFZLSYPFT&R=2STPU5BUFHTYZ&T=C&U=https%3A%2F%2Ffeedback.aws.amazon.com%2F%3Ffea%3Dsnivelyb%26fn%3D%26%3D%26ref_%3Dpe_2509520_187842410&A=ZYD1FRECGO2IBMMOVFUA7DME7NQA&H=G1CTV8AWIR8YG795PJ9NP2M0FJCA&ref_=pe_2509520_187842410)>

From: [REDACTED] <[REDACTED]@amazon.com<mailto:[REDACTED]@amazon.com>>  
Date: Wednesday, April 5, 2017 at 7:38 PM  
To: [REDACTED] <[REDACTED]@co.washington.or.us<mailto:[REDACTED]@co.washington.or.us>>, [REDACTED] <[REDACTED]@amazon.com<mailto:[REDACTED]@amazon.com>>  
Cc: [REDACTED] <[REDACTED]@amazon.com<mailto:[REDACTED]@amazon.com>>, [REDACTED] <[REDACTED]@amazon.com<mailto:[REDACTED]@amazon.com>>, [REDACTED] <[REDACTED]@amazon.com<mailto:[REDACTED]@amazon.com>>  
Subject: PS Summit in DC / WCSO - Introduction



Hi [REDACTED]

Please meet [REDACTED] Sr. System Architect - Data & Analytics. [REDACTED] is responsible for the AI session at the PS Summit and will help set expectations about the event and preparation.

[REDACTED] - [REDACTED] is the man behind the Washington County Sheriff app. I'll let you take it from here on the PS Summit planning.

Please continue to cc me so that I can stay in the loop.

Thanks,

[REDACTED]

From: [REDACTED] <[REDACTED]@co.washington.or.us<mailto:[REDACTED]@co.washington.or.us>>

Date: Wednesday, April 5, 2017 at 10:30 AM

I am available and I have my travel request already in. We are good to go.

From: [REDACTED] [mailto:[REDACTED]@amazon.com]

Sent: Wednesday, April 05, 2017 10:27 AM

To: [REDACTED]

Cc: [REDACTED]

Subject: PS Summit June 14th in Washington DC

Hi [REDACTED]

The PS Summit team is finalizing the sessions (and I'll also need to get legal approval, etc.).

Before I meet with the team, I want to make sure that you are available to be in DC on June 14th. Please confirm.

[REDACTED]

[REDACTED]

---

**From:** [REDACTED]  
**Sent:** Tuesday, July 11, 2017 12:28 PM  
**To:** [REDACTED]  
**Subject:** RE: Would you be able to talk to another customer about your experience with Rekognition?

Awesome, sometimes calendar invites from external sources don't make it through. I will let you know when I get it, if you don't hear from me that I got it within a day, reply to this with the info.

---

From: [REDACTED] [REDACTED]@amazon.com]  
Sent: Tuesday, July 11, 2017 10:38 AM  
To: [REDACTED]  
Subject: Re: Would you be able to talk to another customer about your experience with Rekognition?

Great, thanks! Calendar info will be coming.

Regards,

[REDACTED] - Account Executive, Oregon  
O: [REDACTED] | C: [REDACTED] | [REDACTED]@amazon.com

<<https://aws.amazon.com/>>  
Leave Anytime Feedback On My Performance <[https://pages.awscloud.com/anytime-feedback.html?awsrep=\[REDACTED\]@amazon.com&awsteam=AMER-ISR-Customer-Feedback@Amazon.com](https://pages.awscloud.com/anytime-feedback.html?awsrep=[REDACTED]@amazon.com&awsteam=AMER-ISR-Customer-Feedback@Amazon.com)>

On 7/11/17, 9:58 AM, '[REDACTED]' <[REDACTED]@co.washington.or.us> wrote:

I am wide open Tuesday and Wednesday next week.

---

From: [REDACTED] [REDACTED]@amazon.com]  
Sent: Tuesday, July 11, 2017 8:56 AM  
To: [REDACTED]  
Subject: Re: Would you be able to talk to another customer about your experience with Rekognition?

[REDACTED]

I finally heard back from the other customer about the reference call. It's Federal Signal's VP Innovation, [REDACTED], who would like to chat.

He asked if a call could be set up for mid-next week or after July 25th. Would either of those time slots work?

Regards,

[REDACTED] - Account Executive, Oregon  
O: [REDACTED] | C: [REDACTED] | [REDACTED]@amazon.com

[signature\_850334482]<https://aws.amazon.com/>  
Leave Anytime Feedback On My Performance<https://pages.awscloud.com/anytime-feedback.html?awsrep=[REDACTED]@amazon.com&awsteam=AMER-ISR-Customer-Feedback@Amazon.com>

From: [REDACTED] <[REDACTED]@co.washington.or.us>  
Date: Wednesday, June 28, 2017 at 12:43 PM  
To: [REDACTED] <[REDACTED]@amazon.com>  
Subject: RE: Would you be able to talk to another customer about your experience with Rekognition?

I don't mind meeting with them. I can tell you that as it currently stands it is illegal for us in Oregon to use Facial Recognition on body cameras. So that would be one huge barrier for that.

But I wouldn't mind discussing how I overcame other obstacles and what obstacles still exist.

[REDACTED]

From: [REDACTED] [mailto:[REDACTED]@amazon.com]  
Sent: Wednesday, June 28, 2017 12:40 PM  
To: [REDACTED]  
Subject: Would you be able to talk to another customer about your experience with Rekognition?

[REDACTED]

My colleague has a customer that manufactures police body cameras. Their VP of Innovation read [REDACTED] blog post about how WCSO is using Rekognition, and he was a bit skeptical that recognition of individuals in video feeds would be adopted at the moment because of all the issues surrounding it. That being said, he also believes that this technology will eventually be used broadly. He would love to understand how you overcame stakeholder resistance in order to get this cutting-edge technology implemented.

Would you be able and willing to talk to him? Of course, I totally understand can't or don't feel comfortable doing it.

I guess you're AWS-famous now. 😊

Regards,

[REDACTED] - Account Executive, Oregon  
O: [REDACTED] | C: [REDACTED] | [REDACTED]@amazon.com<mailto:[REDACTED]@amazon.com>  
Leave Anytime Feedback On My Performance<https://pages.awscloud.com/anytime-feedback.html?awsrep=[REDACTED]@amazon.com&awsteam=AMER-ISR-Customer-Feedback@Amazon.com>

[cid:image001.png@01D2FA23.96A34ED0]<https://aws.amazon.com/>

[REDACTED]

---

**From:** [REDACTED] <[REDACTED]@federalsignal.com>  
**Sent:** Wednesday, July 19, 2017 5:47 AM  
**To:** [REDACTED]  
**Cc:** [REDACTED]  
**Subject:** RE: Washington County & Federal Signal Discuss Facial Recognition Software

Wow, this is awesome. Thanks for sending it, [REDACTED] I'll share around my side.

Best,

[REDACTED]

---

**From:** [REDACTED] [mailto:[REDACTED]@co.washington.or.us]  
**Sent:** Tuesday, July 18, 2017 12:43 PM  
**To:** [REDACTED] <[REDACTED]@amazon.com>; [REDACTED] <[REDACTED]@federalsignal.com>  
**Cc:** [REDACTED] <[REDACTED]@amazon.com>  
**Subject:** RE: Washington County & Federal Signal Discuss Facial Recognition Software

[REDACTED]

Here is a link to the local news story about our work with Facial Recognition. <http://www.kgw.com/news/local/using-facial-recognition-to-fight-crime/456564237>

I am the guy working the computer

[REDACTED]

-----Original Appointment-----

**From:** [REDACTED] [mailto:[REDACTED]@amazon.com]  
**Sent:** Wednesday, July 12, 2017 8:13 AM  
**To:** [REDACTED]; [REDACTED]@federalsignal.com  
**Cc:** [REDACTED]@chime.aws; [REDACTED]@chime.aws  
**Subject:** Washington County & Federal Signal Discuss Facial Recognition Software  
**When:** Tuesday, July 18, 2017 10:00 AM-10:30 AM (UTC-06:00) Central Time (US & Canada).  
**Where:** One-click Mobile Dial-in (United States (1)): [REDACTED] [REDACTED]

<https://aws.amazon.com/blogs/ai/using-amazon-rekognition-to-identify-persons-of-interest-for-law-enforcement/>

**From:** [REDACTED] [mailto:[REDACTED]@co.washington.or.us]  
**Sent:** Wednesday, July 12, 2017 10:08 AM  
**To:** [REDACTED] <[REDACTED]@amazon.com>  
**Cc:** [REDACTED] <[REDACTED]@amazon.com>  
**Subject:** RE: Washington County / Federal Signal Call

I am available then, I look forward to talking to him.

**From:** [REDACTED] [mailto:[REDACTED]@amazon.com]  
**Sent:** Wednesday, July 12, 2017 7:49 AM  
**To:** [REDACTED]

Cc: [REDACTED]  
Subject: Washington County / Federal Signal Call

Good morning [REDACTED],

[REDACTED] said you wouldn't mind talking to my customer, [REDACTED] VP Innovation at Federal Signal, about the facial recognition software you implemented to identify persons of interest for law enforcement. Federal Signal sells various public safety products, including body worn cameras, to law enforcement agencies.

[REDACTED] is most interested in learning about the people challenges you overcame to deploy this solution. Are you available for a brief call with [REDACTED] Tuesday morning 7/18 at 10AM CST?

Thank you in advance for your support. Much appreciated!

[REDACTED]

[REDACTED]  
Account Executive  
Amazon Web Services  
E: [REDACTED]@amazon.com  
P: [REDACTED]

----- Amazon Chime Meeting Information -----

You have been invited to an online meeting, powered by Amazon Chime.

1. Click to join the meeting:

[https://chime.aws/\[REDACTED\]](https://chime.aws/[REDACTED])

Meeting ID: [REDACTED]

2. You can use your computer's microphone and speakers, however, a headset is recommended. Or, call in using your phone:

United States [REDACTED]  
Meeting PIN: [REDACTED]

One-click Mobile Dial-in (United States (1)): [REDACTED], [REDACTED]

United States Toll-Free: [REDACTED]  
International: <https://chime.aws/dialinnumbers/>

3. To connect from an in-room video system, use the following:

Amazon Chime bridge: [REDACTED]  
Meeting PIN: [REDACTED]

----- End of Amazon Chime Meeting Information -----

[REDACTED]

---

**From:** [REDACTED]  
**Sent:** Wednesday, July 19, 2017 8:27 AM  
**To:** [REDACTED]  
**Cc:** [REDACTED]  
**Subject:** RE: AWS followup

Sounds good,

Our address is

[REDACTED]

There is a parking structure across the street that you can park in [REDACTED]

When you come into the Sheriff's office there is a large lobby. On the north side of the lobby, there is a room marked "Media", that is where we will meet. I should be in the lobby waiting for you though.

Let me know if you have any other questions about getting here.

Looking forward to seeing you then.

---

**From:** [REDACTED] [REDACTED]@amazon.com]  
**Sent:** Tuesday, July 18, 2017 5:24 PM  
**To:** [REDACTED]  
**Cc:** [REDACTED]  
**Subject:** Re: AWS followup

How about 10AM on Tuesday?

--

[REDACTED]  
Sr. Solutions Architect | [AWS State & Local Government](#)  
P [REDACTED]

Thoughts on our interaction? Provide Feedback [here](#)

---

**From:** [REDACTED] <[REDACTED]@co.washington.or.us>  
**Date:** Tuesday, July 18, 2017 at 10:38  
**To:** [REDACTED] <[REDACTED]@amazon.com>  
**Cc:** [REDACTED] <[REDACTED]@amazon.com>  
**Subject:** RE: AWS followup

Tuesday is a much better day as I don't have a single meeting scheduled on that day. I get in at 8 and leave at 4:30 but if we want to go later I can stay later.

Let me know what time works for you and I will set it up here.

[REDACTED]

---

**From:** [REDACTED] [[mailto:\[REDACTED\]@amazon.com](mailto:[REDACTED]@amazon.com)]  
**Sent:** Tuesday, July 18, 2017 9:15 AM  
**To:** [REDACTED]  
**Cc:** [REDACTED]  
**Subject:** AWS followup

[REDACTED],

Thanks for taking the time to chat with us yesterday. Your Rekognition project sounds really cool and I look forward to working with you on this and other projects.

As we discussed, I'd love to get some time on your schedule to chat about potential enhancements, as well as give you some roadmap info on upcoming services and features that might be of interest to you. Next Tuesday and Thursday are wide open for me if those still work for you. Just let me know your preferred time and the address of your office.

--  
[REDACTED]  
Sr. Solutions Architect | [AWS State & Local Government](#)  
P: [REDACTED]

Thoughts on our interaction? Provide Feedback [here](#)

[REDACTED]

---

**From:** [REDACTED]  
**Sent:** Monday, August 7, 2017 8:01 AM  
**To:** [REDACTED]  
**Cc:** [REDACTED]  
**Subject:** RE: AWS follow up

Why don't we set something up for Wednesday at 10?

---

**From:** [REDACTED] [mailto:[REDACTED]@amazon.com]  
**Sent:** Friday, August 04, 2017 4:12 PM  
**To:** [REDACTED]  
**Cc:** [REDACTED]  
**Subject:** Re: AWS follow up

Hey [REDACTED],

That's great to hear. I'll take a look and follow up with you early next week. I'm pretty open on Tuesday and Wednesday next week if you would like to have a call to talk about IAM and sharing your data. Any time after 10AM both days, just let me know.

--

[REDACTED]  
Sr. Solutions Architect | [AWS State & Local Government](#)  
P: [REDACTED]

Thoughts on our interaction? Provide Feedback [here](#)

---

**From:** [REDACTED] <[REDACTED]@co.washington.or.us>  
**Date:** Friday, August 4, 2017 at 16:03  
**To:** [REDACTED] <[REDACTED]@amazon.com>  
**Cc:** [REDACTED] <[REDACTED]@amazon.com>  
**Subject:** RE: AWS follow up

[REDACTED]  
I think (key word think) I have taken care of the 5 bullet points. Please let me know if you feel the same.

I want to start moving forward with our integration with other agencies. I have been working out how to set up IAM to get cross account searching on Rekognition, and I think I have it.

Let me know what you think and we can start the next steps.

Thanks,  
[REDACTED]

---

**From:** [REDACTED] [mailto:[REDACTED]@amazon.com]  
**Sent:** Thursday, July 27, 2017 1:02 PM



**To:** [REDACTED]  
**Cc:** [REDACTED]  
**Subject:** AWS follow up

[REDACTED]

Thanks for taking the time to talk to me on Tuesday. I wanted to follow up on a couple of items we discussed.

First, we talked about best practices in your account. The [CIS AWS Benchmarks](#) document contains a number of prescriptive best practices and implementation guidance. You'll want to review the items under **Identity and Access Management** as well as **Logging**. The **Networking** section also covers Security Group configuration, including not allowing remote access to the entire Internet (0.0.0.0/0). From my initial review, items that should be reviewed immediately include:

- Enable MFA on the root account
- Create and use an IAM user rather than the root account for management console activity
- Enable CloudTrail in all regions
- Security Groups allow global access for RDP and SSH, which should be restricted only to known IP addresses
- IAM user password policy

We also discussed the [Well-Architected](#) framework. Well-Architected is a program that we use to review applications and help customers identify enhancements that increase Security, Performance, and Cost Effectiveness. I would recommend downloading the whitepaper linked on that page and reviewing it, as the majority of the questions we ask are covered there. The items highlighted above are definitely included so it will be beneficial to address those ASAP. I plan to start filling out the review based on what I can see in our internal systems, and we can schedule a follow up meeting to review any items that I can't answer on my own. This will help you define a roadmap for application and AWS account-level enhancements.

I plan to start on that review early next week. I'll be on the road the latter part of the week so perhaps we can get something on the calendar for the week of August 7-11. I know you mentioned scheduled vacation time... when was that again?

Thanks again, I really look forward to working with you to enhance your application and account configurations, as well as developing a plan to share what you built with other LEOs.

--

[REDACTED]  
Sr. Solutions Architect | [AWS State & Local Government](#)

P: [REDACTED]

Thoughts on our interaction? Provide Feedback [here](#)

[REDACTED]

---

**From:** [REDACTED]  
**Sent:** Monday, August 7, 2017 8:01 AM  
**To:** [REDACTED]  
**Cc:** [REDACTED]  
**Subject:** RE: AWS follow up

Why don't we set something up for Wednesday at 10?

---

**From:** [REDACTED] [mailto:[REDACTED]@amazon.com]  
**Sent:** Friday, August 04, 2017 4:12 PM  
**To:** [REDACTED]  
**Cc:** [REDACTED]  
**Subject:** Re: AWS follow up

Hey [REDACTED],

That's great to hear. I'll take a look and follow up with you early next week. I'm pretty open on Tuesday and Wednesday next week if you would like to have a call to talk about IAM and sharing your data. Any time after 10AM both days, just let me know.

--

[REDACTED]  
Sr. Solutions Architect | [AWS State & Local Government](#)  
P: [REDACTED]

Thoughts on our interaction? Provide Feedback [here](#)

---

**From:** [REDACTED] <[REDACTED]@co.washington.or.us>  
**Date:** Friday, August 4, 2017 at 16:03  
**To:** [REDACTED] <[REDACTED]@amazon.com>  
**Cc:** [REDACTED] <[REDACTED]@amazon.com>  
**Subject:** RE: AWS follow up

[REDACTED]  
I think (key word think) I have taken care of the 5 bullet points. Please let me know if you feel the same.

I want to start moving forward with our integration with other agencies. I have been working out how to set up IAM to get cross account searching on Rekognition, and I think I have it.

Let me know what you think and we can start the next steps.

Thanks,

---

**From:** [REDACTED] [mailto:[REDACTED]@amazon.com]  
**Sent:** Thursday, July 27, 2017 1:02 PM

**To:** [REDACTED]  
**Cc:** [REDACTED]  
**Subject:** AWS follow up

[REDACTED]

Thanks for taking the time to talk to me on Tuesday. I wanted to follow up on a couple of items we discussed.

First, we talked about best practices in your account. The [CIS AWS Benchmarks](#) document contains a number of prescriptive best practices and implementation guidance. You'll want to review the items under **Identity and Access Management** as well as **Logging**. The **Networking** section also covers Security Group configuration, including not allowing remote access to the entire Internet (0.0.0.0/0). From my initial review, items that should be reviewed immediately include:

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- Security Groups allow global access for RDP and SSH, which should be restricted only to known IP addresses
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Thanks again, I really look forward to working with you to enhance your application and account configurations, as well as developing a plan to share what you built with other LEOs.

--

[REDACTED]  
Sr. Solutions Architect | [AWS State & Local Government](#)

**P:** [REDACTED]

Thoughts on our interaction? Provide Feedback [here](#)

[REDACTED]

---

**From:** [REDACTED]  
**Sent:** Friday, September 15, 2017 9:37 AM  
**To:** [REDACTED] [REDACTED] [REDACTED]@chime.aws  
**Subject:** RE: Well Architected Review

I want to make sure that I am dialed into the right bridge. You guys aren't waiting for me in another one right?

-----Original Appointment-----

**From:** [REDACTED] [mailto:[REDACTED]@amazon.com]  
**Sent:** Tuesday, September 12, 2017 10:47 AM  
**To:** [REDACTED] [REDACTED] [REDACTED] [REDACTED]@chime.aws  
**Subject:** Well Architected Review  
**When:** Friday, September 15, 2017 9:30 AM-11:30 AM (UTC-08:00) Pacific Time (US & Canada).  
**Where:** Amazon Chime

Let's go through the Well Architected report to complete unanswered questions. We can also talk about next steps for your Rekognition app.

-----

You have been invited to an online meeting, powered by Amazon Chime.

1. Click to join the meeting:

[https://chime.aws/\[REDACTED\]](https://chime.aws/[REDACTED])

Meeting ID: [REDACTED]

2. You can use your computer's microphone and speakers, however, a headset is recommended. Or, call in using your phone:

United States (1): [REDACTED]

Meeting PIN: [REDACTED]

One-click Mobile Dial-in (United States (1)): [REDACTED]

United States Toll-Free: [REDACTED]

International: <https://chime.aws/dialinnumbers/>

3. To connect from an in-room video system, use the following:

Amazon Chime bridge [REDACTED]

Meeting PIN: [REDACTED]

[REDACTED]

---

**From:** [REDACTED] <[REDACTED]@clackamas.us>  
**Sent:** Monday, January 29, 2018 11:22 AM  
**To:** [REDACTED]  
**Subject:** RE: Rekognition

That'd be great, thanks!

---

**From:** [REDACTED] [mailto:[REDACTED]@co.washington.or.us]  
**Sent:** Monday, January 29, 2018 11:09 AM  
**To:** [REDACTED]  
**Subject:** RE: Rekognition

We don't have a specific policy as of yet.

We plan to draft a policy soon that will generically cover different law enforcement data systems. I can share that when it is complete, but we haven't started it yet.

[REDACTED]

---

**From:** [REDACTED] [mailto:[REDACTED]@clackamas.us]  
**Sent:** Monday, January 29, 2018 9:13 AM  
**To:** [REDACTED]  
**Subject:** Rekognition

Hey [REDACTED],  
Our demo of Rekognition went over pretty well this morning. The Undersheriff did ask us if you guys have crafted any policy regarding its use and if so if you'd be willing to share it.

[REDACTED]

[REDACTED]  
Technology Services Manager  
Clackamas County Sheriff's Office  
[REDACTED] (office)  
[REDACTED] (cell)  
[\[REDACTED\]@clackamas.us](mailto:[REDACTED]@clackamas.us)

Normal Hours M-Thur | 0700-1700



Let me know if you are ok with that and I will submit it today.  
[REDACTED], once you have your deck ready please send it and I will setup a call for us to review.

[REDACTED] | Principal BDM | Data Analytics & AI | Amazon Web Services  
O: [REDACTED] | C: [REDACTED] | Email: [REDACTED]@amazon.com



---

**From:** [REDACTED] <[REDACTED]@amazon.com>  
**Date:** Monday, October 9, 2017 at 11:52 AM  
**To:** [REDACTED] <[REDACTED]@co.washington.or.us>, [REDACTED] <[REDACTED]@amazon.com>  
**Subject:** Re: inevt2017 - Dynamic Business Logic with Machine Learning and Deep Learning: Letting Your Data Build Your System

Thanks for getting this discussion started!

Let me know if you'd like me to be involved at all as we talk about how to build on the content from the PS Summit.

[REDACTED]  
One thing you mentioned last time we talked was to add capabilities to have people register their loved ones who may be missing persons/etc with the system and use that to help law enforcement as well. Is that a project that has been started or something we can add some additional content in terms of what the plans are??

Thanks,  
[REDACTED]

---

**From:** [REDACTED] <[REDACTED]@co.washington.or.us>  
**Date:** Monday, October 9, 2017 at 11:50 AM  
**To:** [REDACTED] <[REDACTED]@amazon.com>  
**Cc:** [REDACTED] <[REDACTED]@amazon.com>  
**Subject:** RE: inevt2017 - Dynamic Business Logic with Machine Learning and Deep Learning: Letting Your Data Build Your System

I am in Portland

I can see what I can add to get another 15 minutes out of it. Am I presenting alone, or is there just that much time in the session?

Conference would be fine by me, For 10/23-10/27, here are all my conflicts(All times in PST):

10/23: 1:30 until end of day  
10/24: Start of day until 10am  
10/25: 1:00 until 3:00  
10/26: 1:00 until 3:00



[REDACTED]

---

**From:** [REDACTED]  
**Sent:** Friday, November 17, 2017 8:32 AM  
**To:** [REDACTED]  
**Cc:** [REDACTED]  
**Subject:** RE: Migrate S3 buckets and Rekognition collections to GovCloud

Thanks for the update

---

**From:** [REDACTED] [mailto:[REDACTED]@amazon.com]  
**Sent:** Friday, November 17, 2017 8:30 AM  
**To:** [REDACTED]  
**Cc:** [REDACTED]  
**Subject:** Re: Migrate S3 buckets and Rekognition collections to GovCloud

[REDACTED]

Quick update - I did replicate the problem in my own accounts, and I've sent this on directly to the Rekognition product team for feedback.

I'll let you know as soon as I hear something back.

--  
[REDACTED]  
Sr. Solutions Architect | [AWS State & Local Government](#)  
P: [REDACTED]

Thoughts on our interaction? Provide Feedback [here](#)

---

**From:** [REDACTED] <[REDACTED]@co.washington.or.us>  
**Date:** Thursday, November 16, 2017 at 08:05  
**To:** [REDACTED] <[REDACTED]@amazon.com>  
**Cc:** [REDACTED] <[REDACTED]@amazon.com>, [REDACTED] <[REDACTED]@amazon.com>, [REDACTED] <[REDACTED]@amazon.com>  
**Subject:** RE: Migrate S3 buckets and Rekognition collections to GovCloud

I created the policy as shown below.

On the policy Summary page I got a strange message:  
This policy does not grant any permissions. To grant access, policies must have an action that has an applicable resource or condition. For details, choose Show remaining Learn more

Here is what I have for the policy JSON

```
1- {
2-   "Version": "2012-10-17",
3-   "Statement": [
4-     {
5-       "Effect": "Allow",
6-       "Action": [
7-         "rekognition:*"
8-       ],
9-       "Resource": "*"
10-    }
11-  ]
12- }
```

When I attempted to index a face I got the following error:

ERROR in tos3Error executing "IndexFaces" on "<https://rekognition.us-gov-west-1.amazonaws.com>"; AWS HTTP error: Server error: `POST <https://rekognition.us-gov-west-1.amazonaws.com>` resulted in a `500 Internal Server Error` response:

```
{"__type":"InternalServerError","Message":"Internal server error"}
InternalServerError (server): Internal server error - {"__type":"InternalServerError","Message":"Internal server error"}
```

As you can see it doesn't really provide a good actionable message.

Thanks,

██████████

-----Original Message-----

From: ██████████ <mailto:██████████@amazon.com>

Sent: Wednesday, November 15, 2017 5:46 PM

To: ██████████

Cc: ██████████

Subject: Re: Migrate S3 buckets and Rekognition collections to GovCloud

██████████

I took a look based on this email and the additional error info you provided to Mark Ronaldson.

It looks like the policy you used on the commercial side is the AWS Managed Policy 'AmazonRekognitionFullAccess', which for some reason has not yet been deployed in GovCloud.

You can work around this by taking the JSON from the managed policy and building your own customer managed policy in GovCloud, which can be attached to whatever IAM object is necessary.

1. Navigate to IAM-Policies and click the Create Policy button.
2. Select 'Create Your Own Policy'.
3. Enter the text below, which corresponds to the AWS managed policy 'AmazonRekognitionFullAccess' in your commercial account. Give it a name and save it.

```
{
  "Version": "2012-10-17",
  "Statement": [
    {
      "Effect": "Allow",
      "Action": [
        "rekognition:*"
      ],
      "Resource": "*"
    }
  ]
}
```

4. Attach this customer managed policy to your objects in the same way you configured your commercial account.

Let me know if that works – I definitely want to make sure you get your re:Invent presentation working!

--

On 11/15/17, 12:18, [REDACTED] <[REDACTED]@co.washington.or.us> wrote:

Hey man, do you have any contacts on the GovCloud side?

I have migrated my s3 Bucket and I wanted to recreate the index now, but the permission that I need to give my IAM user is not available. So I can't programmatically access Rekognition. I am also getting some very vague errors when using the PHP SDK and CLI on GovCloud.

I was hoping to have this done for my talk at re:invent, so I could showcase the cross agency integration, but this is a big roadblock.

Thanks,

[REDACTED]

P.S. Sorry for using you as Tech support like this, but I honestly don't know what else to do, there aren't many forum discussions on this stuff.

-----Original Message-----

From: [REDACTED] [mailto:[REDACTED]@amazon.com]

Sent: Friday, November 10, 2017 12:01 PM

To: [REDACTED]

Subject: Re: Migrate S3 buckets and Rekognition collections to GovCloud

Yeah, unfortunately there is no way to transfer the index.

--

[REDACTED]

On 11/10/17, 11:59, [REDACTED] <[REDACTED]@co.washington.or.us> wrote:

Thanks, that makes sense. My major concern was reindexing the bucket into Rekognition. If I can't transfer the collection then I guess it will just have to be that way. This may give me an excuse to write a Lambda function to index on addObject.

---

From: [REDACTED] <[REDACTED]@amazon.com>  
Sent: Friday, November 10, 2017 8:54 AM  
To: [REDACTED]  
Subject: Re: Migrate S3 buckets and Rekognition collections to GovCloud

[REDACTED]

Sorry for the delayed response on this one, I've been on the road most of the week.

Because the GovCloud and commercial Regions are not directly connected, the copy needs to cross the public internet. The best way to accomplish this is to launch a Linux instance in your GovCloud account, and configure the CLI with profiles for both your commercial and GovCloud accounts, that have access to the appropriate source and destination buckets. That instance will need enough storage to hold the entire dataset. We just launched a feature that automatically encrypts objects in an S3 bucket <<https://aws.amazon.com/blogs/aws/new-amazon-s3-encryption-security-features/>> by default, so it might be good to turn this on for your target bucket before you do the copy.

Once you have the pieces in place, you'll run the 's3 cp' CLI command <<http://docs.aws.amazon.com/cli/latest/reference/s3/cp.html>> twice on that box, once to copy the data from the source bucket to the Linux machine, and again to copy from the Linux machine into the target GovCloud bucket. Once you have validated the copy, you can terminate the Linux instance.

Be sure to run through that CIS Benchmark document in your new account to ensure your security profile is tight. Let me know if you have any questions, I'm happy to help you get up and running in GovCloud.

--  
[REDACTED]  
Sr. Solutions Architect | AWS <<https://aws.amazon.com/stateandlocal/>> State & Local Government <<https://aws.amazon.com/stateandlocal/>>  
P: [REDACTED]

Thoughts on our interaction? Provide Feedback  
here <[https://feedback.aws.amazon.com/?ea=eschwent&fn=\[REDACTED\]&ln=\[REDACTED\]](https://feedback.aws.amazon.com/?ea=eschwent&fn=[REDACTED]&ln=[REDACTED])>

---

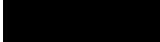

From: [REDACTED] <[REDACTED]@co.washington.or.us>  
Date: Monday, November 6, 2017 at 15:59  
To: [REDACTED] <[REDACTED]@amazon.com>  
Subject: Migrate S3 buckets and Rekognition collections to GovCloud

[REDACTED]

I am about to get integrated with Clakamas, but they started on the GovCloud and so I need to migrate to the GovCloud so we can share collections.

Is there a tool to migrate S3 buckets and/or Rekognition collections?

Thanks,

  
Sr. Information Systems Analyst  
Washington County Sheriff's Office  


[REDACTED]

---

**From:** [REDACTED]  
**Sent:** Wednesday, February 1, 2017 4:18 PM  
**To:** [REDACTED]  
**Cc:** [REDACTED]  
**Subject:** RE: Amazon Rekognition / Washington County Jail

[REDACTED]  
Thanks for reaching out, I have really enjoyed getting to know this product and working to implement it into this new app.

Let me expand upon our use case that [REDACTED] stated. I am using the face comparison portion of the product to search for faces from unknown people. I currently have close to 300,000 images that I uploaded to S3 (all booking photos from our jail since 2001). I have indexed all those images and have created an app using Swift and a web app with PHP that will search the input image against the indexes.

I am hoping to expand our backend of images to every law enforcement agency in the metro Portland area. And possibly even to all of Oregon and beyond.

I found the product pretty easy to learn and use and it meets the expectations for the use case stated above. But there were a couple of things that I would like to see made better.

One feature that is missing, or at least is not living up to what we need it to do is the image tagging portion of the product. We would love to use it for auto tagging tattoos when we book people into jail, however, the only tag we get back when we send it a picture of a tattoo is the tag "Tattoo". This does show that the product is smart enough to know that it isn't a drawing or something like that, but what I would really like to get back is "Dragon" or "Flower" or anything like that. This would help us remove the free form that needs to be filled out by deputies and thus Dragon could become Dragn or Dragun or any other misspelling, and thus not allowing for searchability that we need.

Something minor too is that I would love the API when searchFacesByImage is called to return a reference to the S3 object that the face was indexed to. Currently I have to use the ExternalID to create the back trace, and it seems that we should be able to just get something automatically.

One final thing would be to have a feedback loop for the product that would allow it to learn. An example of this is that I have multiple images returned for one search that are not the suspect we are looking for, but one is. If I could tell you that option 2 was correct, I would like to see the machine learn more about how to get the result more accurate.

All in all I am very impressed so far and I look forward to using it more and more. I do have one final question that you may or may not be able to answer, but as we expand there is the concern about speed. If we put close to a million images in index will that create a problem with speed when we search?

Thanks for your time,  
[REDACTED]  
Sr. Information Systems Analyst  
Washington County Sheriff  
[REDACTED]

---

**From:** [redacted] [mailto:[redacted]@amazon.com]  
**Sent:** Wednesday, February 01, 2017 3:47 PM  
**To:** [redacted]  
**Cc:** [redacted]  
**Subject:** Amazon Rekognition / Washington County Jail

Hi [redacted]

Thanks for your reply and the overview of your use case. Good to know that Rekognition is meeting your expectations and will connect with [redacted] to discuss further.

Hi [redacted]

[redacted] and I are on the Amazon Rekognition team at Amazon. Per [redacted] email, we'd like to connect with you to discuss your use case. Let us know when would be convenient (next week).

Thanks,

[redacted]

[redacted]  
Sr. Business Development Manager - Amazon Rekognition  
[redacted]@amazon.com  
[redacted]  
<https://aws.amazon.com/rekognition/>

---

**From:** [redacted] <[redacted]@gmail.com>  
**Date:** Wednesday, February 1, 2017 at 2:52 PM  
**To:** "[redacted]" <[redacted]@amazon.com>  
**Cc:** [redacted] <[redacted]@amazon.com>, [redacted] <[redacted]@amazon.com>  
**Subject:** Re: Supporting your success with AWS's Amazon Rekognition

Hello [redacted]

We are getting up and running with using Rekognition for our app that allows us to search our (Washington County Jail) booking photos for hits against unidentified suspects. I would love to have you discuss our use case with our lead developer, [redacted] and any feedback he has. Would you like to get in touch with him via email [redacted]@co.washington.or.us) or a phone/video meeting would also be great.

We are seeing great results from the product and anticipate increasing usage by bringing on more counties into the system. And I know [redacted] would love to discuss some of the gaps he has.

Thanks for reaching out

On Tue, Jan 31, 2017 at 4:42 PM, [redacted] <[redacted]@amazon.com> wrote:

Thanks, [redacted]

Hi [redacted]

Thanks for checking out Amazon Rekognition for facial recognition. Let me know if you have questions, feedback or would like to discuss the specifics of your use case.

We look forward to your reply.

Thanks,

██████

████████████████████

Sr. Business Development Manager - Amazon Rekognition

██████ [@amazon.com](mailto:██████@amazon.com)

████████████████████

---

**From:** ██████ ██████ [@amazon.com](mailto:██████@amazon.com)>  
**Date:** Tuesday, January 31, 2017 at 2:28 PM  
**To:** ██████ [@gmail.com](mailto:██████@gmail.com)" ██████ [@gmail.com](mailto:██████@gmail.com)>  
**Cc:** ██████ ██████ [@amazon.com](mailto:██████@amazon.com)>, "████████████████████" ██████ [@amazon.com](mailto:██████@amazon.com)>  
**Subject:** Supporting your success with AWS Rekognition

Hi ██████,

I am the Account Manager for AWS covering Oregon, and I noticed that you were leveraging our new Rekognition service. Because the service is so new, we are reaching out to customers to make sure they get all the support they need to succeed with their particular use case.

I have copied ██████ and ██████ who are both on the Rekognition product team so they can offer their expertise as needed.

Thanks!



Regards,



Account Executive, Oregon

O: [REDACTED] C: [REDACTED] [REDACTED] [@amazon.com](mailto:[REDACTED]@amazon.com)

*Leave Anytime Feedback On My Performance*



[re:Invent 2016 Launch Webinar Series](#)

[REDACTED]

---

**From:** [REDACTED]  
**Sent:** Monday, August 7, 2017 8:01 AM  
**To:** [REDACTED]  
**Cc:** [REDACTED]  
**Subject:** RE: AWS follow up

Why don't we set something up for Wednesday at 10?

---

**From:** [REDACTED] [mailto:[REDACTED]@amazon.com]  
**Sent:** Friday, August 04, 2017 4:12 PM  
**To:** [REDACTED]  
**Cc:** [REDACTED]  
**Subject:** Re: AWS follow up

Hey [REDACTED],

That's great to hear. I'll take a look and follow up with you early next week. I'm pretty open on Tuesday and Wednesday next week if you would like to have a call to talk about IAM and sharing your data. Any time after 10AM both days, just let me know.

--

[REDACTED]  
Sr. Solutions Architect | [AWS State & Local Government](#)  
P: [REDACTED]

Thoughts on our interaction? Provide Feedback [here](#)

---

**From:** [REDACTED] <[REDACTED]@co.washington.or.us>  
**Date:** Friday, August 4, 2017 at 16:03  
**To:** [REDACTED] <[REDACTED]@amazon.com>  
**Cc:** [REDACTED] <[REDACTED]@amazon.com>  
**Subject:** RE: AWS follow up

[REDACTED]  
I think (key word think) I have taken care of the 5 bullet points. Please let me know if you feel the same.

I want to start moving forward with our integration with other agencies. I have been working out how to set up IAM to get cross account searching on Rekognition, and I think I have it.

Let me know what you think and we can start the next steps.

Thanks,

---

**From:** [REDACTED] [mailto:[REDACTED]@amazon.com]  
**Sent:** Thursday, July 27, 2017 1:02 PM

To: [REDACTED]  
Cc: [REDACTED]  
Subject: AWS follow up

[REDACTED]

Thanks for taking the time to talk to me on Tuesday. I wanted to follow up on a couple of items we discussed.

First, we talked about best practices in your account. The [CIS AWS Benchmarks](#) document contains a number of prescriptive best practices and implementation guidance. You'll want to review the items under **Identity and Access Management** as well as **Logging**. The **Networking** section also covers Security Group configuration, including not allowing remote access to the entire Internet (0.0.0.0/0). From my initial review, items that should be reviewed immediately include:

- Enable MFA on the root account
- Create and use an IAM user rather than the root account for management console activity
- Enable CloudTrail in all regions
- Security Groups allow global access for RDP and SSH, which should be restricted only to known IP addresses
- IAM user password policy

We also discussed the [Well-Architected](#) framework. Well-Architected is a program that we use to review applications and help customers identify enhancements that increase Security, Performance, and Cost Effectiveness. I would recommend downloading the whitepaper linked on that page and reviewing it, as the majority of the questions we ask are covered there. The items highlighted above are definitely included so it will be beneficial to address those ASAP. I plan to start filling out the review based on what I can see in our internal systems, and we can schedule a follow up meeting to review any items that I can't answer on my own. This will help you define a roadmap for application and AWS account-level enhancements.

I plan to start on that review early next week. I'll be on the road the latter part of the week so perhaps we can get something on the calendar for the week of August 7-11. I know you mentioned scheduled vacation time... when was that again?

Thanks again, I really look forward to working with you to enhance your application and account configurations, as well as developing a plan to share what you built with other LEOs.

--

[REDACTED]  
Sr. Solutions Architect | [AWS State & Local Government](#)

P: [REDACTED]

Thoughts on our interaction? Provide Feedback [here](#)

**From:** [REDACTED]  
**Sent:** Friday, October 6, 2017 2:16 PM  
**To:** [REDACTED]  
**Subject:** RE: 2017 OSSA Awards Deadline

Awesome, thank you.

---

**From:** [REDACTED]  
**Sent:** Friday, October 06, 2017 2:16 PM  
**To:** [REDACTED]  
**Subject:** RE: 2017 OSSA Awards Deadline

OK great. I made one tweak, just wanted you to know what you wrote. 😊

We also see this technology as a useful tool for identifying those adults and children who may become lost and have difficulty communicating vital information about themselves. Additionally, [REDACTED] is currently working on a mechanism for multiple counties to share their mugshots with each other. The media recently ran a story outlining the technology and the successes attributed to [REDACTED] great work: <http://www.kgw.com/news/local/using-facial-recognition-to-fight-crime/456564237>

---

**From:** [REDACTED]  
**Sent:** Friday, October 06, 2017 2:13 PM  
**To:** [REDACTED]  
**Subject:** RE: 2017 OSSA Awards Deadline

Yes, please. Change anything you like. I'm not all that happy with what I wrote, but my brain is in slow mode today ;-)

---

**From:** [REDACTED]  
**Sent:** Friday, October 06, 2017 2:11 PM  
**To:** [REDACTED]  
**Subject:** RE: 2017 OSSA Awards Deadline

Are you okay with me adding this segment:

We also see this technology as a useful tool for identifying those adults and children who may become lost and have difficulty communicating vital information about themselves. Additionally, [REDACTED] is currently working on a mechanism for multiple counties to share their mugshots with each other. The media recently ran a story outlining the technology and our successes, <http://www.kgw.com/news/local/using-facial-recognition-to-fight-crime/456564237>

[REDACTED]

---

**From:** [REDACTED]  
**Sent:** Thursday, October 12, 2017 4:19 PM  
**To:** [REDACTED]  
**Subject:** Progress

[REDACTED] asked me today how you guys were coming on Rekognition. I figured I would check in to see how you were doing.

I just rolled out our solution so that all deputies can use it and we are seeing some good results.

[REDACTED]  
Sr. Information Systems Analyst  
Washington County Sheriff's Office  
[REDACTED]

[REDACTED]

---

**From:** [REDACTED]  
**Sent:** Thursday, October 12, 2017 1:13 PM  
**To:** [REDACTED]  
**Subject:** RE: Facial Recognition

Cool!

---

**From:** [REDACTED]  
**Sent:** Thursday, October 12, 2017 11:07 AM  
**To:** [REDACTED]  
**Subject:** Facial Recognition

Good article about Artificial Intelligence that mentions the SO and facial recognition:

The fact that tech giants are turning their own in-house AI into on-demand services is a boon for organizations that are tight on resources. [REDACTED] for example, a senior information-systems analyst for the sheriff's office in Washington County, Oregon, became intrigued last year by a new Amazon Web Services offering called Rekognition, which includes the ability to recognize faces. The county's trove of hundreds of thousands of booking photos taken at the time of arrests has become so overwhelming that even filtering a search by age, gender, or race often doesn't meaningfully narrow things down. That limits its usefulness when police officers need to identify a person of interest, such as a shoplifter caught on camera. "I am not a data scientist, nor do I have any idea how facial recognition or artificial intelligence works," [REDACTED] cheerfully admits. Within a couple of months, however, he was able to fashion a system that uses Rekognition to match newly taken photos with ones from the archive. So far, it's helped identify 20 suspects.

It was also an extraordinary bargain. The initial setup cost the sheriff's office only around \$400; the monthly bill from Amazon Web Services is about \$6. "With every dollar I spend, I'm accountable to the taxpayers," says [REDACTED] "We're spending such small amounts of money and we're getting a huge return on investment."

---

**From:** [REDACTED]  
**Sent:** Tuesday, October 10, 2017 10:10 PM  
**To:** [REDACTED]  
**Subject:** Another article

<https://www.fastcompany.com/40474564/how-to-stop-worrying-and-love-the-great-ai-war-of-2018>

[REDACTED]

---

**From:** [REDACTED]  
**Sent:** Tuesday, July 11, 2017 3:52 PM  
**To:** [REDACTED]  
**Cc:** [REDACTED]  
**Subject:** RE: Emailing: Washington County, Ore., Adds Facial Recognition to Suite of Investigative Tools

I will leave this in LET's court, unless you need me to do something.

---

**From:** [REDACTED]  
**Sent:** Tuesday, July 11, 2017 8:13 AM  
**To:** [REDACTED]  
**Cc:** [REDACTED]@state.or.us; [REDACTED] [REDACTED] [REDACTED]  
**Subject:** RE: Emailing: Washington County, Ore., Adds Facial Recognition to Suite of Investigative Tools

Hi [REDACTED]

I have forwarded your request through to our LET group. Sgt. [REDACTED] and LET MGR [REDACTED] are the people to decide. It seems that a simple process could be worked out with approval.

Thanks,

Tim

[REDACTED]  
Washington County Sheriff's Office  
Special Investigations Unit  
Major Crimes Team  
215 SW Adams Avenue  
Hillsboro, Or 97123  
Desk [REDACTED]  
Main [REDACTED]  
Fax [REDACTED]

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---

**From:** [REDACTED] [mailto:[REDACTED]@doj.state.or.us]  
**Sent:** Monday, July 10, 2017 9:23 AM  
**To:** [REDACTED]  
**Cc:** [REDACTED]@state.or.us  
**Subject:** FW: Emailing: Washington County, Ore., Adds Facial Recognition to Suite of Investigative Tools

[REDACTED]

I saw this article in the Govtech magazine.

I was wondering is there a possibility of the Fusion Center and the Watch Center running photo's through you guys?

As far as I know you guys are the first to embrace this technology on the LE level.

Let me know thanks

[REDACTED]  
**Oregon TITAN Fusion Center**  
**Oregon Dept of Justice**  
[REDACTED]

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## Justice and Public Safety

# Washington County, Ore., Adds Facial Recognition to Suite of Investigative Tools

Facial recognition tech was previously seen as something only the CIAs and FBIs of the world would have access to. But now, in 2017, smaller jurisdictions are deploying it as part of an everyday suite of crime-fighting tools.

by Eyragon Eidam / July 7, 2017

Shutterstock

In Washington County, Ore., a new facial recognition tool is giving law enforcement a leg up when it comes to identifying criminals in their jurisdiction.

For the last six month or so, the Washington County Sheriff's Department has been leveraging face-searching tech a way to drum up leads in criminal investigations.



What initially started as a conversation in November of 2016 about how to make the agency's mugshot database searchable resulted in the December 2016 adoption of Amazon's Rekognition technology, which layers onto existing databases. Chris Adzima, a senior information systems analyst with the county, said the tech seemed to fit the bill

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"Our team was thinking that there should be a way we could automatically search. We have all of these booking photos and we figured there should be a way we could do that," he said. "While we were discussing that, about a week into those discussions, Amazon announced Rekognition and we thought that was the perfect thing to test out

As it stands, bulletins and persons of interest are sent to Adzima to run through the system for potential matches. The county's database is home to some 300,000 images, which translates to roughly 200,000 individuals.

Before moving ahead with the project, Adzima said policies needed to be developed to ensure when and how the system would be used in criminal cases and identifying at-risk individuals registered in the Help Me Home database.

"Even though we don't get any complaints, people can misconstrue what is going on. I think the important thing to know is that we are not out there taking pictures of people and running them to know who they are and where they are," he said. "These are all situations where a crime has been committed and captured on camera. ... Those are the images we are using. We're not using this for anything else because we don't have any desire to do anything else with it."

When it comes to turnaround times and accuracy, the senior analyst joked that the results depend on a couple of variables, including whether or not he is at his desk to run the request. If he is, the requesting party can expect an answer in as little as five minutes.

The accuracy of the system is a little more complicated to nail down. Not only does a decent match require a decent workable image, but it also requires the subject in question to be in the database. In early testing, Adzima said known offender trial runs registered at around 75 percent accuracy.

For investigators like Detective Tim Kiurski, the tool has been a welcome addition to the suite of investigative resources. In just the six months since the system has been in play, the software has been used in the investigation of everything from a murder case to a simple package theft.

Most often, Kiurski said authorities are working from cellphone photos or surveillance camera stills. "Anybody that can't figure out who somebody is, we're going to run it through there as long as it is related to a crime, of course."

But the software is no replacement for the institutional knowledge of the agency staff or their investigative prowess. Both Adzima and Kiurski agree that it is merely supplemental.

"Sometimes the identification coming from the system is from 10 years ago, so the guy doesn't even look exactly the same," Kiurski said. "If you were to see him on the street, you might not think he looks the same, but the software is picking up that this is the same guy. ..."

Supplemental though it may be, neighboring agencies have expressed interest and benefited from the facial recognition system, and there is momentum to expand into shared resource with intranet access for county personnel.

"When you are talking about inter-government agencies working together, there are things you have to do and the steps you have to take, and we are working on that," Adzima explained. "The idea is that we want to get as many other agencies with these type of images in as possible, because that will expand our ability to help and do these searches. Criminals don't abide by county lines when they decide they want to break the law."

Eyragon Eidam Assistant News Editor

---

Eyragon Eidam is the assistant news editor for *Government Technology* magazine, and covers legislation, social media and public safety. He can be reached at [eeidam@erepublic.com](mailto:eeidam@erepublic.com).

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\*\*\*\*\*

[REDACTED]

---

**From:** [REDACTED]  
**Sent:** Wednesday, September 20, 2017 12:08 PM  
**To:** [REDACTED]  
**Subject:** RE: Regarding AWS PUBLIC SUMMIT - REKOGNITION Technology

Talk to you then

---

**From:** [REDACTED] [REDACTED]@azhidta.org]  
**Sent:** Wednesday, September 20, 2017 12:01 PM  
**To:** [REDACTED]  
**Subject:** Re: Regarding AWS PUBLIC SUMMIT - REKOGNITION Technology

PST. Will you call my LAN line when you are ready... [REDACTED]

Thank you again.

[REDACTED]  
Technology Director  
Arizona HIDTA  
[REDACTED]

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**From:** [REDACTED] <[REDACTED]@co.washington.or.us>  
**Sent:** Wednesday, September 20, 2017 11:21:31 AM  
**To:** [REDACTED]  
**Subject:** RE: Regarding AWS PUBLIC SUMMIT - REKOGNITION Technology

Sounds good, in Arizona are you guys currently with Pacific or Mountain time?

**From:** [REDACTED] [mailto:[REDACTED]@azhidta.org]  
**Sent:** Wednesday, September 20, 2017 11:19 AM  
**To:** [REDACTED]  
**Subject:** Re: Regarding AWS PUBLIC SUMMIT - REKOGNITION Technology

How about Friday at 9am?

[REDACTED]  
Technology Director  
Arizona HIDTA  
[REDACTED]

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From: [REDACTED] <[REDACTED]@co.washington.or.us<mailto:[REDACTED]@co.washington.or.us>>  
Sent: Wednesday, September 20, 2017 11:17:20 AM  
To: [REDACTED]  
Subject: RE: Regarding AWS PUBLIC SUMMIT - REKOGNITION Technology

I am available Thursday morning, and all day Friday. When is the best time during those times that would be good for a chat?

[REDACTED]

From: [REDACTED] mailto:[REDACTED]@azhidta.org]  
Sent: Wednesday, September 20, 2017 10:45 AM  
To: [REDACTED]  
Subject: Regarding AWS PUBLIC SUMMIT - REKOGNITION Technology

[REDACTED]

We met at the AWS Public summit. You gave me your business card.  
I am the technology directory for Arizona HIDTA. Do you have a few minutes to talk by phone this week. My mobile #

[REDACTED]

Your time would be greatly appreciated. I am trying to implement the Rekognition technology.

Respectfully,

[REDACTED]  
Technology Director  
Arizona HIDTA

[REDACTED]  
Please consider the environment before printing this email.

NOTICE: This message is intended exclusively for the individual or entity to which it is addressed. If you have received this message in error, please notify the sender immediately by email and immediately delete this message and all of its attachments.

[REDACTED]

---

**From:** [REDACTED] <[REDACTED]@amazon.com>  
**Sent:** Thursday, September 28, 2017 3:56 PM  
**To:** [REDACTED]  
**Subject:** RE: POC for Arizona LE

[REDACTED]

Thank you for the contact. I will reach out to [REDACTED] and see how AWS can help.

[REDACTED]

[REDACTED] | Amazon Web Services  
**Mobile:** [REDACTED]  
**Email:** [REDACTED]@amazon.com

---

**From:** [REDACTED] [mailto:[REDACTED]@co.washington.or.us]  
**Sent:** Friday, September 22, 2017 10:51 AM  
**To:** [REDACTED] <[REDACTED]@amazon.com>  
**Cc:** [REDACTED] <[REDACTED]@amazon.com>; [REDACTED] <[REDACTED]@amazon.com>  
**Subject:** RE: POC for Arizona LE

Thanks [REDACTED]

[REDACTED] at the AZ HIDTA is the contact. [REDACTED] would you prefer me to make the introduction or do you just want to reach out? If you do, his email is [REDACTED]@azhidta.org.

Thanks,  
[REDACTED]

---

**From:** [REDACTED] [mailto:[REDACTED]@amazon.com]  
**Sent:** Friday, September 22, 2017 10:44 AM  
**To:** [REDACTED]  
**Cc:** [REDACTED]  
**Subject:** Re: POC for Arizona LE

[REDACTED]

[REDACTED] is based in Phoenix and is the local account manager for Arizona – he would be the best point of contact and can coordinate our internal resources (likely me) to help AZ HIDTA with their Rekognition solution.

You also know [REDACTED] who coordinates our Justice & Public Safety efforts. I've included both of them on this email for visibility.

Thanks for the information, we appreciate it and are happy to help folks get rolling on AWS. If you get any other queries like this based on your presentations, [REDACTED] and I always happy to help get people routed to local resources.

--

[REDACTED]  
Sr. Solutions Architect | [AWS State & Local Government](#)



Thoughts on our interaction? Provide Feedback [here](#)

---

**From:** [REDACTED] <[REDACTED]@co.washington.or.us>

**Date:** Friday, September 22, 2017 at 09:42

**To:** [REDACTED] <[REDACTED]@amazon.com>

**Subject:** POC for Arizona LE

[REDACTED],  
Do you have a point of contact for a colleague of mine who is trying to spin up a similar solution to mine using recognition? I just had a call with him and I think he could benefit from having someone like you as a resource.

He is with HIDTA in Arizona – they deal with drug trafficking.

Thanks,

[REDACTED]  
Sr. Information Systems Analyst  
Washington County Sheriff's Office  
[REDACTED]

[REDACTED]

---

**From:** [REDACTED]  
**Sent:** Monday, November 6, 2017 3:51 PM  
**To:** [REDACTED]  
**Cc:** [REDACTED]  
**Subject:** RE: AWS re:Invent

I am on GovCloud, but I haven't migrated my entire bucket or collection over yet. That will be my mission starting right now to ensure we can integrate.

---

**From:** [REDACTED] [mailto:[REDACTED]@co.clackamas.or.us]  
**Sent:** Monday, November 06, 2017 3:48 PM  
**To:** [REDACTED]  
**Cc:** [REDACTED]  
**Subject:** RE: AWS re:Invent

[REDACTED]

Are you on GovCloud? We won't be able to integrate S3 or Rekognition indexes unless you are. [REDACTED] is out of the office this week. I'll touch base with him when he returns and see if and when we can connect.

[REDACTED]  
Systems Project Analyst  
[REDACTED]@clackamas.us  
Desk: [REDACTED]  
Mobile: [REDACTED]

---

**From:** [REDACTED] [mailto:[REDACTED]@co.washington.or.us]  
**Sent:** Monday, November 6, 2017 3:46 PM  
**To:** [REDACTED] <[REDACTED]@co.clackamas.or.us>  
**Cc:** [REDACTED] <[REDACTED]@clackamas.us>  
**Subject:** RE: AWS re:Invent

Do you think another meeting might be helpful? We could discuss the issues you ran into and possibly even set up the integration.

That is awesome to see you having a working solution along with returning good results.

Let me know on the meeting.

---

**From:** [REDACTED] [mailto:[REDACTED]@co.clackamas.or.us]  
**Sent:** Monday, November 06, 2017 3:41 PM  
**To:** [REDACTED]  
**Cc:** [REDACTED]  
**Subject:** RE: AWS re:Invent

Hey [REDACTED]

Yes, we have a working solution. I just ran this example: <http://canyouid.me/blog/2017/08/seattle-pd-case-2017-307921-a/> and got a decent hit:

# Facial Recognition Results

## Menu

[New Search](#)  
[Search History \(7\)](#)

## Reference Image



## 12 Comparison Results



State ID: [REDACTED]  
 Booking #: [REDACTED]  
 Booking Date: [REDACTED]  
 Similarity: **93.12%**



State ID: [REDACTED]  
 Booking #: [REDACTED]  
 Booking Date: [REDACTED]  
 Similarity: **83.43%**

I've been busy ramping up at Clackamas County so I've been a little too busy to connect. We should touch base though; I ran into several things including having to learn much of Rekognition the hard way - your AWS post doesn't fill in a lot of gaps and AWS Rekognition documentation is very lacking or wrong. I also ported to GovCloud after setting everything up in normal AWS and there is no clear path to move from one to the other so I had to basically reimport 300K images and recreate the Rekognition index.

[REDACTED]  
Systems Project Analyst  
[REDACTED]@clackamas.us  
Desk: [REDACTED]  
Mobile: [REDACTED]

---

**From:** [REDACTED] [mailto:[REDACTED]@co.washington.or.us]  
**Sent:** Monday, November 6, 2017 3:21 PM  
**To:** [REDACTED] <[REDACTED]@co.clackamas.or.us>; [REDACTED] <[REDACTED]@clackamas.us>  
**Subject:** AWS re:Invent

Hey guys,  
I wanted to check in on your progress for facial recognition. I got invited to speak at AWS re:Invent about my solution and I would love to say that we have been able to integrate across agencies.

Even if we only do one or two searches against each others collections I can say that we have been successful.

Let me know,

[REDACTED]  
Sr. Information Systems Analyst  
Washington County Sheriff's Office  
[REDACTED]



[REDACTED]

---

**From:** [REDACTED]  
**Sent:** Thursday, September 7, 2017 8:59 AM  
**To:** [REDACTED]  
**Subject:** RE: WashCo - Facial Recognition

Awesome, glad to see you are making progress.

Let me know if anything else comes up. Or if there are any other snippets I could send you that might help.

[REDACTED]

---

**From:** [REDACTED] [mailto:[REDACTED]@co.clackamas.or.us]  
**Sent:** Thursday, September 07, 2017 8:13 AM  
**To:** [REDACTED]  
**Subject:** RE: WashCo - Facial Recognition

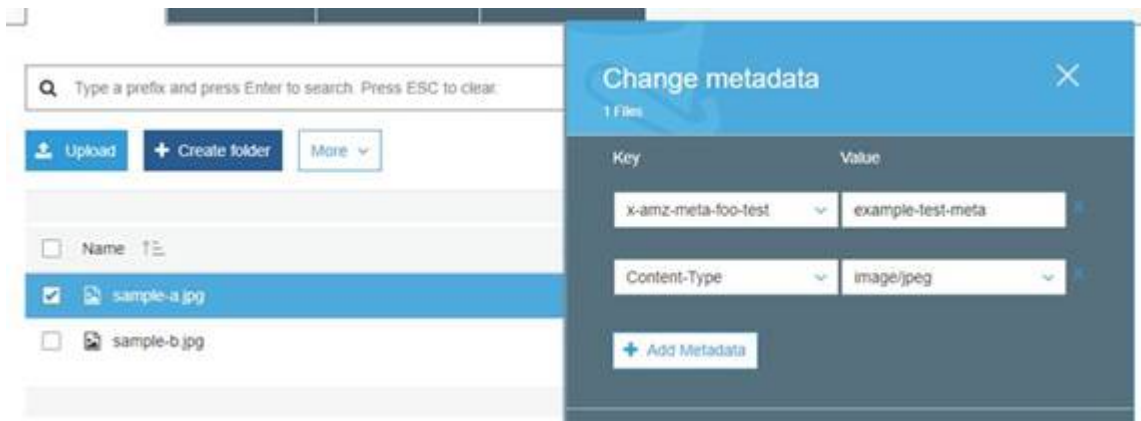
Good morning [REDACTED],

Thanks, the documentation for adding metadata via the `s3.putObject` is poor . I was trying this in NodeJS and receiving an unexpected key error:

```
s3.putObject({
  'Bucket': s3Bucket,
  'Key': file,
  'Body': base64data,
  'ContentType': 'image/jpeg',
  'x-amz-meta-foo-test': 'example-test-meta'
}, function (resp) {
  console.log(arguments);
  console.log('Successfully uploaded, ', file)
})
```

This works:

```
s3.putObject({
  'Bucket': s3Bucket,
  'Key': file,
  'Body': base64data,
  'ContentType': 'image/jpeg',
  'Metadata': {
    'foo-test': 'example-test-meta'
  }
}, function (resp) {
  console.log(arguments);
  console.log('Successfully uploaded, ', file)
})
```



Thanks for pointing me in the right direction! Next I'm going to process a handful of images and index with Rekognition, then probably bag it all and port it to PHP.

██████████  
 Systems Project Analyst  
 ██████████@clackamas.us  
 Desk: ██████████  
 Mobile: ██████████

---

**From:** ██████████ [mailto:██████████@co.washington.or.us]  
**Sent:** Wednesday, September 6, 2017 6:11 PM  
**To:** ██████████ <██████████@co.clackamas.or.us>  
**Subject:** RE: WashCo - Facial Recognition

I actually was able to get the snippet from home. It is pretty simple actually.

The following assumes you have \$client as an s3 client object, \$key as the name of the file you are uploading, and \$row as an object result from the database where you store your information.

Everything in the 'Metatdata' array is user specified (so the array keys become x-amz-meta-identifier, and so on).

Two call outs are that you obviously want to change the bucket name, and I have accidentally omitted sex from the metadata and will be fixing that soon. I would suggest not making that mistake.

```
$result = $client->putObject(array(
    'Bucket' => 'wco-let-faces',
    'Key'    => $key,
    'Body'   => file_get_contents("http://".$row->Img_Path),
    'Metadata' => ["identifier"=>$row->bookingNum,
                  "name"=>$row->JL_BK_NAM,
                  "dob"=>$row->JL_DOB,
                  "race"=>$row->JL_RAC,
                  "height"=>$row->JL_HGT,
                  "weight"=>$row->JL_WGT,
                  "eyes"=>$row->JL_EYE]
));
```

Thanks,

██████████

---

**From:** [REDACTED] [mailto:[REDACTED]@co.clackamas.or.us]  
**Sent:** Wednesday, September 06, 2017 5:00 PM  
**To:** [REDACTED]  
**Subject:** RE: WashCo - Facial Recognition

Hey [REDACTED]

When we spoke, we discussed meta-data you were using to tag photos. It's not referenced in your post; is it the "x-amz-meta-" attributes when you post to S3 or something else?

Thanks,  
[REDACTED]

---

**From:** [REDACTED] [mailto:[REDACTED]@co.washington.or.us]  
**Sent:** Tuesday, August 8, 2017 1:13 PM  
**To:** [REDACTED] <[REDACTED]@clackamas.us>; [REDACTED] <[REDACTED]@co.clackamas.or.us>  
**Cc:** [REDACTED] <[REDACTED]@co.washington.or.us>; [REDACTED] <[REDACTED]@co.washington.or.us>; [REDACTED] <[REDACTED]@co.clackamas.or.us>  
**Subject:** RE: WashCo - Facial Recognition

Here is the AWS AI blog post I wrote. It should get you pretty close to what you need.

<https://aws.amazon.com/blogs/ai/using-amazon-rekognition-to-identify-persons-of-interest-for-law-enforcement/>

I will send you some code later

-----Original Appointment-----

**From:** [REDACTED] [mailto:[REDACTED]@clackamas.us]  
**Sent:** Wednesday, July 12, 2017 8:28 AM  
**To:** [REDACTED]  
**Cc:** [REDACTED]  
**Subject:** WashCo - Facial Recognition  
**When:** Tuesday, August 08, 2017 9:30 AM-11:00 AM (UTC-08:00) Pacific Time (US & Canada).  
**Where:** CCSO | 9101 SE Sunnybrook | Rm 333

---

NOTE: This message was trained as non-spam. If this is wrong, please correct the training as soon as possible.

---

[REDACTED]

---

**From:** [REDACTED]  
**Sent:** Tuesday, November 14, 2017 11:52 AM  
**To:** [REDACTED]  
**Subject:** RE: Facial recognition service question  
**Attachments:** facialRecognitionTraining.pptx

Attached is the training document.

The blog post that [REDACTED] linked to is a good overview of the technical side.

If you have any questions about the system let me know \_\_\_\_\_

**From:** [REDACTED] [mailto:[REDACTED]@beavertonoregon.gov]  
**Sent:** Tuesday, November 14, 2017 11:28 AM  
**To:** [REDACTED]  
**Subject:** RE: Facial recognition service question

Thanks for the quick response. A training document would be great.

Our technology captain is looking to understand how the system works and make sure its use lines up with department policy. We may have more questions as we move forward with our analysis.

-----Original Message-----

**From:** [REDACTED] [mailto:[REDACTED]@co.washington.or.us]  
**Sent:** Tuesday, November 14, 2017 10:53 AM  
**To:** [REDACTED] <[REDACTED]@co.washington.or.us>; [REDACTED] <[REDACTED]@beavertonoregon.gov>  
**Subject:** RE: Facial recognition service question

Are you looking for a basic how to because We have a training document, I can get it for you if that is what you are looking for.

If you need a more technical overview of how matches are made I can give you some info, let me know if that is what you need.

Currently we do store the images that are searched, but we store them locally on our servers and they are not accessible by anyone externally.

Let me know what other questions you have.

Thanks,  
[REDACTED]

---

**From:** [REDACTED]  
**Sent:** Tuesday, November 14, 2017 10:25 AM  
**To:** [REDACTED]  
**Cc:** [REDACTED]  
**Subject:** RE: Facial recognition service question



█  
I'll refer you to our developer, █ He should be able to answer any questions you have.

I don't believe that the photos are stored, but █ can confirm.

Here is a link to a blog post that █ wrote about the program:  
<https://aws.amazon.com/blogs/ai/using-amazon-rekognition-to-identify-persons-of-interest-for-law-enforcement/>

█  
From: █ [mailto:█@beavertonoregon.gov]  
Sent: Tuesday, November 14, 2017 10:02 AM  
To: █  
Subject: Facial recognition service question

Hi █

Does your team have an instructions document that I can go over to get a sense of how the facial recognition service works? Does the service store the photos that officers upload for comparison?

Thanks,

--

█  
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**From:** [REDACTED]  
**Sent:** Thursday, November 30, 2017 1:27 PM  
**To:** [REDACTED]@yumaaz.gov  
**Subject:** Rekognition

Thanks for reaching out to us about our implementation of Rekognition. I am the primary developer and architect of the solution we put together.

I can tell you that setting up the solution is very simple, and the pricing is even better. We currently have around 305,000 booking photos that have been uploaded to AWS and indexed into Rekognition. The initial loading of the images and indexing of the faces cost around \$400. After that we pay about \$6 a month in fees.

Our deputies use the tool roughly 20 times a day. I have heard nothing but good things about the ease of use. It returns results in less than 10 seconds.

I am happy to discuss this more with you. I am at Amazon re:Invent this week, but we can set some time up after this and either have a call or we can just go back and forth in email.

Thanks,

[REDACTED]  
Sr. Information Systems Analyst  
Washington County Sheriff's Office

---

**From:** [REDACTED] - Evidence Identification Supervisor [mailto:[REDACTED]@yumaaz.gov]  
**Sent:** Wednesday, November 29, 2017 10:03 AM  
**To:** [REDACTED]  
**Subject:** Rekognition

I recently read an article on [RouteFifty.com](http://RouteFifty.com) the highlighted the Washington County Sheriff's use of Amazon Rekognition as a facial recognition program, and how successful it's been. I'd like to talk to someone with knowledge of the program, pricing, how often it's used, ease of use, etc. Could someone please contact me? Thanks.

[REDACTED]  
Evidence and Forensics Supervisor  
Certified Property and Evidence Specialist  
Yuma Police Department

[REDACTED] office  
[REDACTED] cell  
*SPI 105<sup>TH</sup> A.O.C.*



[REDACTED]

---

**From:** [REDACTED]  
**Sent:** Thursday, December 21, 2017 3:41 PM  
**To:** [REDACTED]  
**Subject:** RE: Anaheim

The skype id is [REDACTED]

I don't know if the [REDACTED] part is required.

The email address for it is [REDACTED]

---

**From:** [REDACTED] [mailto:[REDACTED]@anaheim.net]  
**Sent:** Thursday, December 21, 2017 3:34 PM  
**To:** [REDACTED]  
**Subject:** RE: Anaheim

What is your skype account? I'll see if my business account can see you on the consumer side.

---

**From:** [REDACTED] [mailto:[REDACTED]@co.washington.or.us]  
**Sent:** Thursday, December 21, 2017 3:20 PM  
**To:** [REDACTED]  
**Subject:** RE: Anaheim

We don't have Skype for business yet, My experience is that there are like 5 accounts per person and I can never get them right in the heat of the moment.

---

**From:** [REDACTED] [mailto:[REDACTED]@anaheim.net]  
**Sent:** Thursday, December 21, 2017 3:18 PM  
**To:** [REDACTED]  
**Subject:** RE: Anaheim

I think I remember the city saying our skype business needs to be opened up to your domain... is that your experience as well?

---

**From:** [REDACTED] [mailto:[REDACTED]@co.washington.or.us]  
**Sent:** Thursday, December 21, 2017 12:59 PM  
**To:** [REDACTED] <[REDACTED]@anaheim.net>  
**Subject:** RE: Anaheim

Skype works for me, let's make sure we get synced up as contacts before the meeting so we don't miss out on time trying to get connected.

I will walk through the front and back end for you.

---

**From:** [REDACTED] [mailto:[REDACTED]@anaheim.net]  
**Sent:** Thursday, December 21, 2017 12:08 PM

**To:** [REDACTED]  
**Subject:** RE: Anaheim

Would Skype work on your end? Would you be able to show us what your front end looks like and how it works?

---

**From:** [REDACTED] [mailto:[REDACTED]@co.washington.or.us]  
**Sent:** Thursday, December 21, 2017 11:00 AM  
**To:** [REDACTED] <[REDACTED]@anaheim.net>  
**Subject:** RE: Anaheim

That time works great for me.

Let me know how you want to meet.

---

**From:** [REDACTED] [mailto:[REDACTED]@anaheim.net]  
**Sent:** Thursday, December 21, 2017 10:46 AM  
**To:** [REDACTED]  
**Subject:** Anaheim

Thank you for taking my call [REDACTED]

I'm excited to learn more about your solution and how it's working. To give you some background, we have been talking to a company that does facial recognition as well as indexing videos for words, phrases, objects, OCR, and geolocations. Are initial plan was to start with the booking photos and test the product but the product itself hasn't been well received. This is how I came across your article: <https://aws.amazon.com/blogs/ai/using-amazon-rekognition-to-identify-persons-of-interest-for-law-enforcement/> - I loved the simplicity of it while keeping the information under our span of control.

The challenge I see for us is lack of expertise with AWS and web languages... no one is comfortable with PHP, the staff we have usually uses .Net. That is why I want to set up a call and let the technical people pick your brain. Would Thursday January 4<sup>th</sup> at 10AM PST work for you?



[REDACTED]  
Communication Supervisor  
Anaheim Police Department  
O: [REDACTED] | M: [REDACTED]  
[REDACTED]

*Community, Teamwork, Excellence*



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[REDACTED]

---

**From:** [REDACTED]  
**Sent:** Wednesday, February 15, 2017 12:25 PM  
**To:** [REDACTED]  
**Subject:** RE: AWS and LET

Prepare for obfuscation... my guess is they'll cite the fact that mugshots are public records as being somehow relevant.

---

**From:** [REDACTED]  
**Sent:** Wednesday, February 15, 2017 10:56 AM  
**To:** [REDACTED]  
**Subject:** RE: AWS and LET

The two immediate things that come to mind are:

- Who did the SaaS review for AWS? I don't recall that coming through. Even though we have an existing instance of AWS, this should have come through that process. Since the LET is well versed on the SaaS review process, who determined it wasn't necessary in this case? Who from ITS signed off?
- Since the SaaS review doesn't appear to have been done, who did the security review to determine the risk associated with moving data outside the secure network into a cloud repository? Again, who from ITS signed off?

-----Original Message-----

**From:** [REDACTED]  
**Sent:** Wednesday, February 15, 2017 10:35 AM  
**To:** [REDACTED] <[REDACTED]@co.washington.or.us>; [REDACTED] <[REDACTED]@co.washington.or.us>  
**Subject:** RE: AWS and LET

Speechless. I have been working to get this issue packaged for CAO/SO Exec discussion - this so far beyond the context I was preparing to set.

-----Original Message-----

**From:** [REDACTED]  
**Sent:** Wednesday, February 15, 2017 10:25 AM  
**To:** [REDACTED]  
**Subject:** AWS and LET

Earlier this week, I ran into [REDACTED] and [REDACTED] at Starbucks. I made a silly remark about the fact that "there must be no iOS development happening at the WCSO right now" (because their developers were at Starbucks)... Then the floodgates opened.

They were excited to tell me (over a 5 minute conversation) the following:

1. They have uploaded all the county mugshots to Amazon S3's storage service 2. They are using Amazon Web Service "Rekognition" API <https://aws.amazon.com/rekognition/> to do facial recognition of images submitted from an iOS application to find matches with existing, known individuals in the County Jail mugshot database. Images to be compared can be snapped via the camera or other source.

3. They have deployed this application to multiple test users and had found, at that time, at least 4 matches (one who had committed a felony) 4. They were in dialog with AWS and will "be speaking at the AWS conference because AWS loves this idea and had no idea that their API could be used in this manner" 5. They would like to get the region involved in this system, manage it, and charge fees to the local jurisdictions for running this system.

I did not, in my Starbucks conversation, ask for technical details about any of this, though they were kind enough to show me a very quick demo of the iOS app.

I confirmed with [REDACTED] that he has not had any contact with LET relating to AWS, so the account being used for this purpose is currently of unknown origin.

I am assuming that this will be on the agenda for our meeting today with LET, but so far nothing has shown up on the agenda.

[REDACTED]  
Enterprise Business Application Manager  
Washington County Government (OR)  
[REDACTED]

---

**From:** [REDACTED] <[REDACTED]@amazon.com>  
**Sent:** Friday, November 17, 2017 2:11 PM  
**To:** [REDACTED]  
**Cc:** [REDACTED]  
**Subject:** City Of Orlando Quote for Amazon Rekognition

Thank you all for working on getting the quote approved in time our launch at AWS re:invent 2017 on Nov 29<sup>th</sup>, 2017. We truly appreciate your support. We look forward to working with you and making this a successful partnership.

Regards

[REDACTED]  
PM, Amazon Rekognition