



How Okta Took an Out-of-the-Box Idea and Blazed Its Own Certification Trail

Krayah Tamba

- Director, Certification Program
- Okta



Benjamin Hunter

- Vice President of Sales
- Caveon

# okta

## AGENDA

- Journey of the Okta Certification Program
- Challenges and Opportunities
- Solutions Implemented
- Outcomes and Achievements



# What does it mean to innovate?

## in·no·vate

/'inə,vāt/ 

*verb*

make changes in something established, especially by introducing new methods, ideas, or products.

"the company's failure to diversify and innovate competitively"

- introduce (something new, especially a product).  
"innovating new products, developing existing ones"



# Okta at a Glance

**Founded  
in 2009**

Pioneered  
Identity  
Management in  
the Cloud

NASDAQ Listed  
April, 2017

**4700+  
Customers**

SMB to Fortune  
500,  
every industry,  
every geography

**4M+  
Daily Users**

People use Okta  
to securely  
connect to the  
tools they need  
to be productive

**5,500+  
Integrations**

Industry's  
broadest,  
deepest network  
of integrations

**4X Gartner  
MQ Leader**

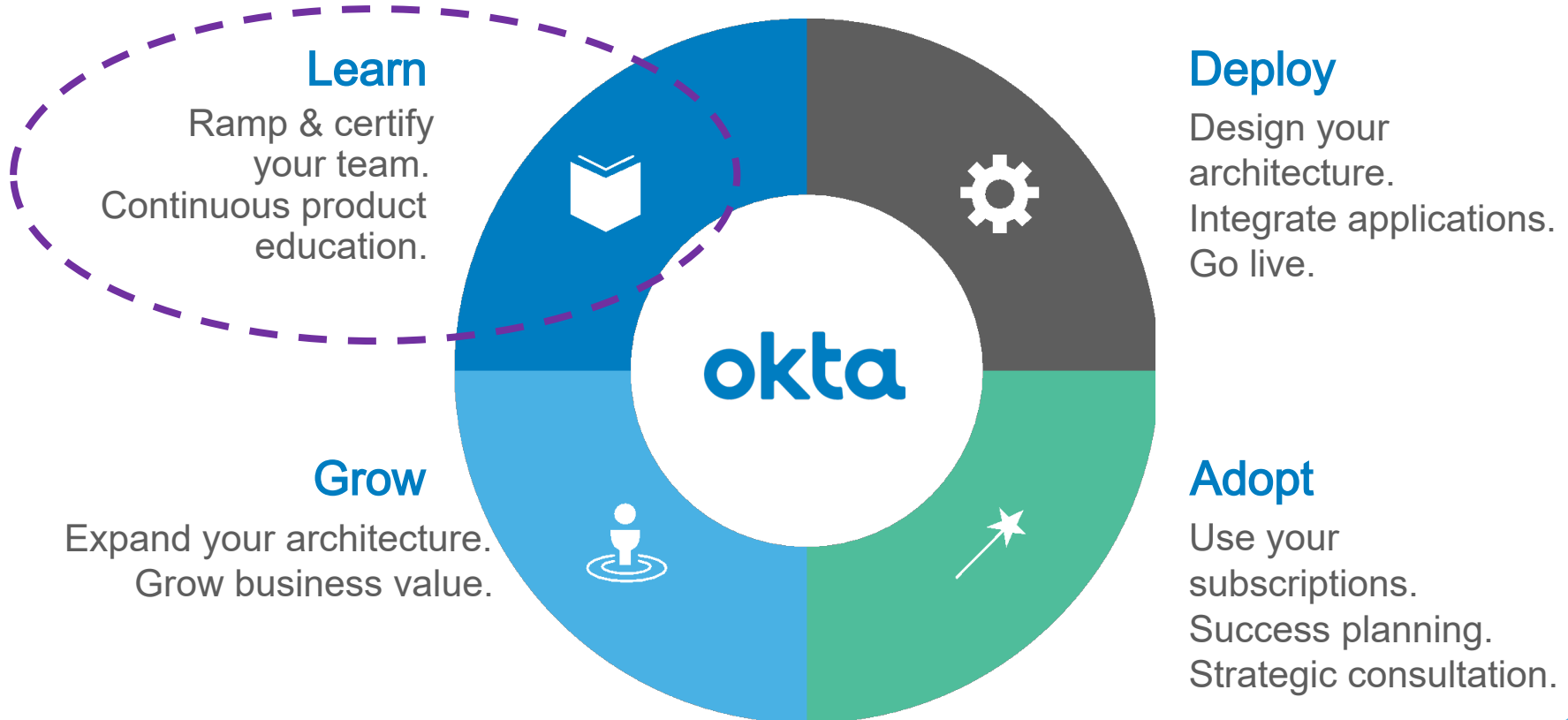
Only vendor in  
the industry to  
achieve this



A person wearing a blue and white checkered shirt is seated and looking at a smartphone. The image is overlaid with a semi-transparent blue gradient. Centered on the image is the text "Enable any organization to use any technology" in a white, sans-serif font.

Enable any organization to use any technology

# Driving Customer Success by Leading with Learning



# Why certification?

Okta is on a mission to become an **iconic** company...

- and we want **partners** to drive sales and services market share
- and **customers** to confidently use licensed features
- and **employees** to consistently reference, implement, and support the capabilities of the platform



# Program criteria...

## build a program aligned with Okta's brand

### Secure

- Strict PII security requirements
- Exam integrity – no items for sale on the internet

### User Centric

- 100% Cloud
- Always On 365 x 24 x 7
- Easy exam sign up & delivery

### Flexible

- Easy item refresh
- Full exam publishing control to production
- Keep up with 48 Okta product releases a year

### Cost Effective

- Remote item development
- 100% digital
- Pass savings to test takers







## Conducted Extensive Research

- Program framework / levels
- Exam costs
- Cert maintenance
- Program policies
- Exam length & duration
- Vendors in play

Contacted top tier cert vendors

## Consulted with Experts

- Phil Konneman @ Autodesk
- Dave Foster @ Caveon

# Learnings

## PROS

- Web-based proctoring was becoming more mainstream

## CONS

- Compromised item banks due to cheating
- Lengthy exam publishing cycles (involving 'taxation' payments for every publishing event)
- Test development and delivery services were consolidated and cost prohibitive
- Aging test driver technology that wasn't able to keep pace with modern methods of testing ---little innovation happening



# We had to make a decision



So, how did the project unfold?



# Three innovators with deep domain expertise...



State-of-the-art test exam development and monitoring services dedicated to detecting, correcting, and preventing test fraud

Remote proctoring services to improve security and efficiency in online testing without sacrificing exam integrity

Experts in the development and delivery of secure, 100% cloud-based technology solutions that deliver an excellent user experience.

- Exam development experts
- DOMC patent holding pioneers

- Web proctoring experts
- High-volume capacity
- 24 x 7 in all geographies

- CTO, CSO, CCO support
- Modest budget in place

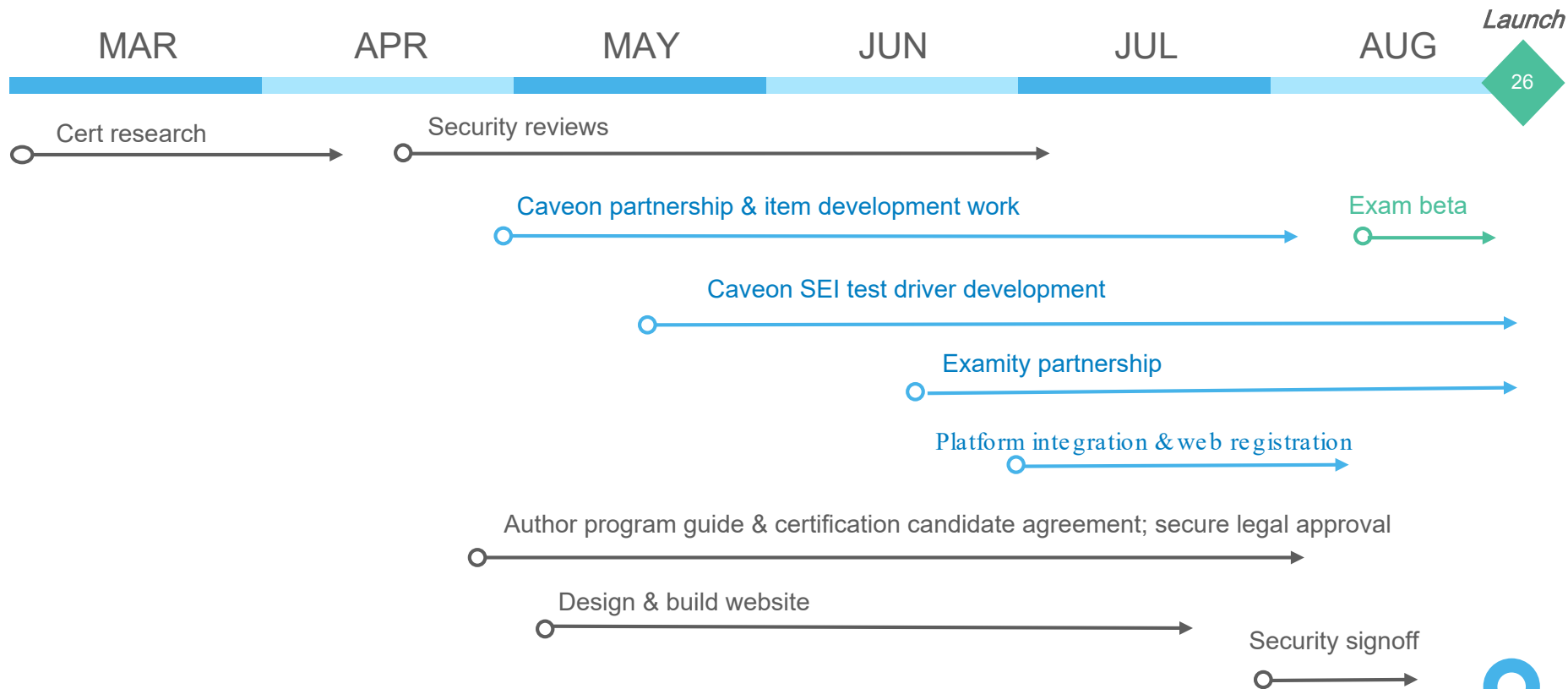
# ...but there was a lot to do...



- Test driver unproven in external programs
- SEI test driver not integrated w/proctoring tool
- No commercial tool licensing, support, or documentation
- Shed 'University' paradigm (professors & classes)
- Website exam registration
- Integration with SEI test driver
- Eliminate PII capture and storage protocol
- Cert website
- Logos & branding
- Candidate agreement
- Program policy guide
- Security audit



# ... and an aggressive timeline.



# A unified team with synergistic goals



## Believers in the power of technology as a disrupter

- Commercialize SEI and Scorpion toolsets
- Take DOMC mainstream
- Inspire a paradigm shift for incumbent vendors
- Strengthen a toe-hold in the hi-tech certification market
- Launch a secure program that meets industry recognized standards and offers an accurate measure of candidate performance





# Discrete Option Multiple Choice (DOMC) is at the core of our innovation

Dave Foster

Ph.D., Chairman and  
CEO, Caveon

DOMC Patent Holder



# How DOMC Works

## *Third Grade Mathematics*

Item 1 of 3

“Is this set of numbers in order from greatest to least?”

290, 237, 245, 186

Show Inner Workings

Yes

No



# How DOMC Works (Continued)

## *Third Grade Mathematics*

Item 1 of 3

“Is this set of numbers in order from greatest to least?”

260, 215, 134, 163

Show Inner Workings

Yes

No





4. You disable a user in an Active Directory instance that is integrated with Okta.

Is this what happens to the user's account in Okta?

[SHOW ME AN OPTION](#)

[Send Item Feedback](#)



4. You disable a user in an Active Directory instance that is integrated with Okta.

Is this what happens to the user's account in Okta?

Application passwords managed by Okta are reset.

YES

NO

[Send Item Feedback](#)



4. You disable a user in an Active Directory instance that is integrated with Okta.

Is this what happens to the user's account in Okta?

The user account is deactivated in Okta.

YES

NO

[Send Item Feedback](#)



4. You disable a user in an Active Directory instance that is integrated with Okta.  
Is this what happens to the user's account in Okta?

Okta sends an email message to the administrator to disable the account in Okta.

YES

NO

[Send Item Feedback](#)

# DOMC Item Scoring

1. Selecting the **Yes** button for the correct option = correct score.
2. Selecting the **Yes** button for an incorrect option = incorrect score
3. Selecting the **No** button for the correct option = incorrect score
4. Selecting the **No** button for an incorrect option postpones scoring, and another answer option(s) is presented
5. An additional, un-scored answer option may be presented under special circumstances at the conclusion of a test item, after both incorrect or correct responses to disrupt item feedback loop



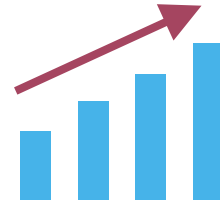


# Why DOMC?

DOMC items are easier to read.



The DOMC format increases the validity of test scores.



Reduces the probability of getting the correct answer simply by elimination.



The DOMC item format helps prevent item theft and cheating.



# Core Technologies



# Scorpion - Item Authoring and Item Banking



Efficient and secure development tools for creating high-stakes exams.

Sign in with Caveon ID

New to Scorpion? Create a free account!

## Scorpion Features

### Security for Exam Development

Scorpion protects data, secures processes, and offers secure item design features, keeping content safe during development and beyond.

### Remote Collaboration

### Resource Management

### Custom Workflows

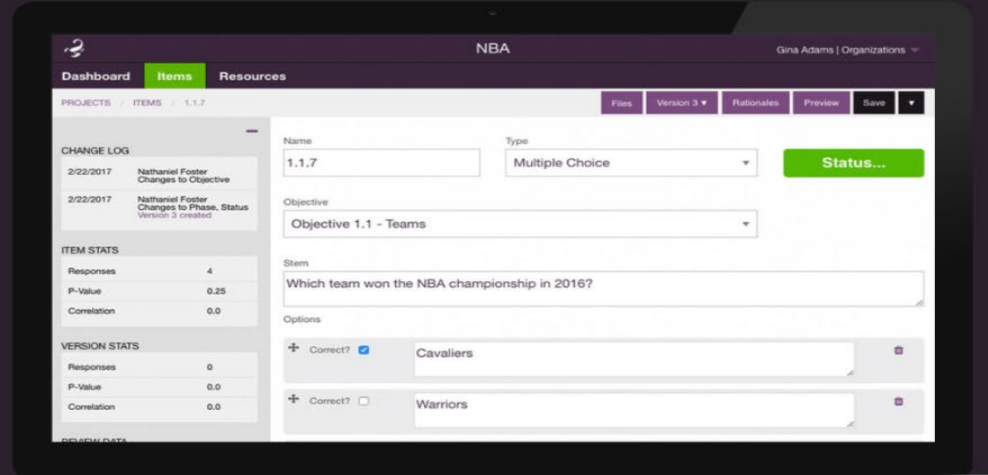
### Easy Form Creation and Balancing

### Secure Access

Sign in with Caveon ID

Create a Free Account

Request premium account



# Scorpion features



- Secure Platform– SOC2 Certified
- 100% Web Based
- Individual User Access Management
- Secure Access



# SEI- Test Driver



## SEI SECURE EXAM INTERFACE

Deliver exams that are protected against cheating and theft.

Sign in with Caveon ID

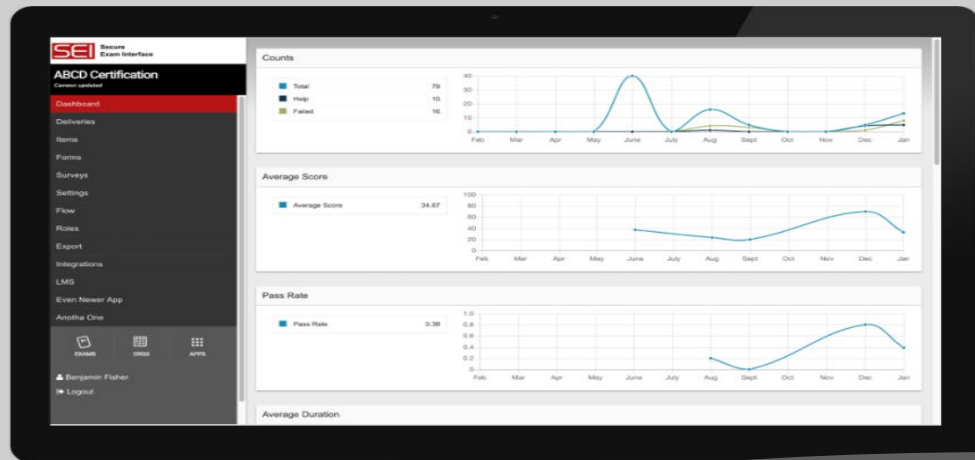
Request a free demo

### SEI Features

#### Flexible API

The API allows easy integration with other test development and test administration systems.

- ▶ More item types
- ▶ Secure test deliveries
- ▶ Remote proctoring tools
- ▶ Adaptive exams
- ▶ Quick item republishing
- ▶ Export exam results
- ▶ Secure access



Sign in with Caveon ID

Request a free demo



# SEI features



- Secure Platform– SOC2 Certified
- Rapid, selfpublishing and re-publishing
- Integrated with remote proctor
- Emulates lockdown browser functionality
- On-screen watermarking, as well as content/presentation based search tools for exposed content (if discovered)
- Secure Access



# SEI- Live Demo



# Test Registration & Proctoring



**okta**

examiity  
BETTER TEST INTEGRITY.

Login

User ID

Password

LOG IN REGISTER

Forgot Your Password

Enter Your User ID

GET PASSWORD

Important OKTA CERTIFICATION PROGRAM Information:

1. Prior to registering for or taking an Okta Certification exam, you should review the terms, conditions, and policies outlined in the
  - o Okta Certification Program Agreement
  - o Okta Certification Program Handbook

Zoom Meeting

Talking Proctor 303

Everyone + Webcams Zoom: 66% Screenshot

Okta Start Exam

0:02 / 1:01:05

FairExam® Level : Level 3





# Testing session review & flags



Secure | <https://prod.examity.com> | Welcome: Kpayah Tamba [ Admin ] | Central Time : 04/16/2018 07:44 AM

**okta** | **examity** BETTER TEST INTEGRITY.

Dashboard | Exam Status | Courses/Exams | Students | Reports | My Profile | Vouchers | Logout | Live Chat | Email Support | Phone Support: 855-EXAMITY

### Exam Status

**Legend:**  
Blue Alert  
Green No Violation  
Yellow Possible Violation  
Red Violation

ID	Student First Name	Student Last Name	Program Name	Exam Name	Schedule Time	FairExam <sup>®</sup> Level	Status	Blue	Green	Yellow	Red	View
135141433			Okta Certification Program	Okta Certified Consultant Exam	04/12/2018 10:00 PM	Level 3	Approved by Auditor	1	2	0	0	<a href="#">View</a>
135141439			Okta Certification Program	Okta Certified Professional Exam	04/12/2018 6:00 PM	Level 3	Approved by Auditor	0	2	0	0	<a href="#">View</a>
135141441			Okta Certification Program	Okta Certified Administrator Exam	04/11/2018 3:30 PM	Level 3	Approved by Auditor	0	2	0	0	<a href="#">View</a>
135141438			Okta Certification Program	Okta Certified Administrator Exam	04/11/2018 7:30 AM	Level 3	Approved by Auditor	1	1	1	0	<a href="#">View</a>
135141431			Okta Certification Program	Okta Certified Professional Exam	04/09/2018 7:00 PM	Level 3	Approved by Auditor	0	2	0	0	<a href="#">View</a>
135141432			Okta Certification Program	Okta Certified Professional Exam	04/09/2018 5:00 PM	Level 3	Approved by Auditor	0	2	0	0	<a href="#">View</a>



# Outcomes and achievements



# Okta Certification Program



<b>KNOWS &amp; SUPPORTS</b>	<b>ADMINISTERS &amp; MANAGES</b>	<b>IMPLEMENTS &amp; CONFIGURES</b>	<b>* BUILDS CUSTOM INTEGRATIONS</b>	<b>* ARCHITECTS SOLUTIONS</b>
...is responsible for daily operational support; Okta champion	...is responsible for administration and management of Okta	...is responsible for implementation and configuration of Okta	... is responsible for Okta platform development	... is responsible for design of secure IAM strategies using Okta

\* Availability TBD



# We didn't get DOMC right on the first go

- All DOMC item answers were simultaneously visible to the SMEs when conducting reviews ---UGH!
- Item clarity was a big issue
  - stems have to be succinct to minimize superfluous reading yet descriptive enough to prevent misinterpretation of the question
  - answers must be unequivocally right or wrong because there is no notion of 'best answer'
  - parallelism in item answers is critical for consistency
- Users didn't understand scoring and grew frustrated when answers continued to be displayed after they got something 'correct'
- Testers could not go back and change an answer /flag an item for review



# We adjusted several things in the following 3 months

1. Conducted a full item bank review & refresh for clarity
2. Republished all exam forms
3. Implemented item 'skip' feature to allow testers to return to unanswered questions
4. Promoted importance of practice tests!
5. Made exam feedback more robust
6. Ensured future exams were authored and reviewed with a “DOMGfirst” lens



# The final solution met all criteria

## Secure

- Rigorous PII handling processes & auditing
- Stringent proctoring to prevent cheating
- Security features built into test driver + DOMC item type

## User Centric

- Scorpion, SEI, and Examiity are 100% cloud based
- 365 x 24 x 7 testing window – any geo
- Candidate self-registration

## Flexible

- Configurable role-based access control for SMEs & editors
- Free publish /republish without vendor intervention
- Item version tracking

## Cost Effective

- Remote item development /review
- No printed score reports or paper certificates
- Savings from physical fulfillment and exam maintenance passed on to candidates



If you build it, will they come?

**No - It is not that simple**







# Drive Program Awareness

# Program promotion is job #1

## Email signature branding

From: Okta (Laura Brumage) ⇅

To:


Cc:

Bcc:


Subject: look at me now!

Wow--- I just earned my Okta Professional Certification!

Laura Brumage, VP Education Services  
(o) 415.930.4391 (m) 415.867.4645  
[laura.brumage@okta.com](mailto:laura.brumage@okta.com)



## Certification Logos and Badges in Social Media Profiles




**Laura Brumage**  
Vice President, Education Services at Okta, Inc.  
Okta, Inc. • Vassar College  
San Francisco, California • 500+ &

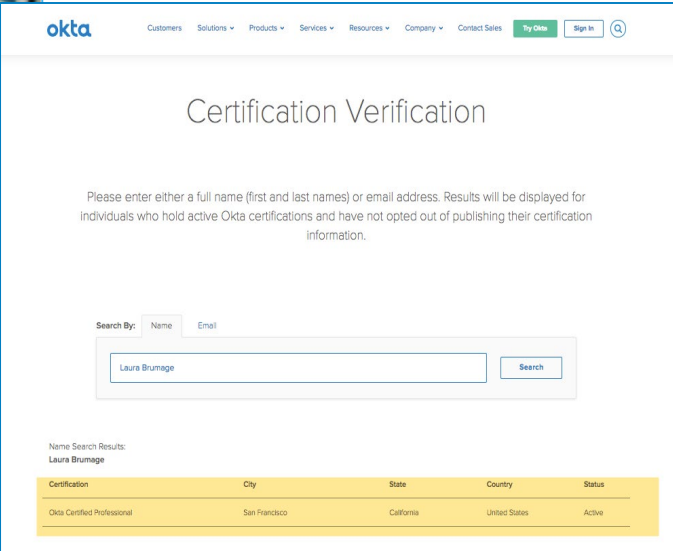
Accomplishments

1 Certification

**Okta Certified Professional**  
Aug 2016 – Present

 Okta Certified Professional - Okta, Inc.

## Certification look-up verification tool



okta Customers Solutions Products Services Resources Company Contact Sales Try Okta Sign In

### Certification Verification

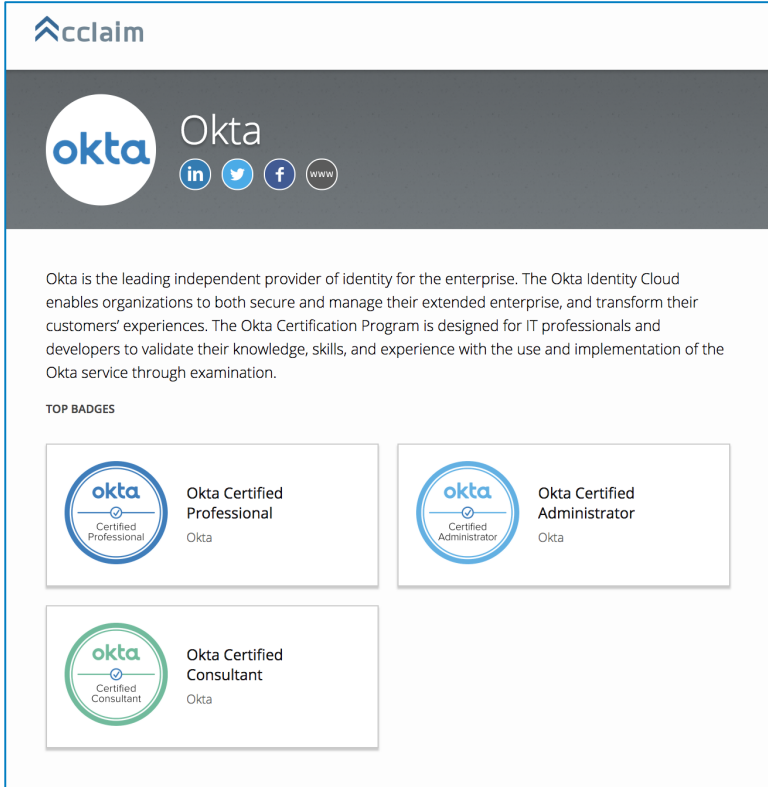
Please enter either a full name (first and last names) or email address. Results will be displayed for individuals who hold active Okta certifications and have not opted out of publishing their certification information.

Search By:

Name Search Results:  
Laura Brumage

Certification	City	State	Country	Status
Okta Certified Professional	San Francisco	California	United States	Active

# Use tools like digital badges






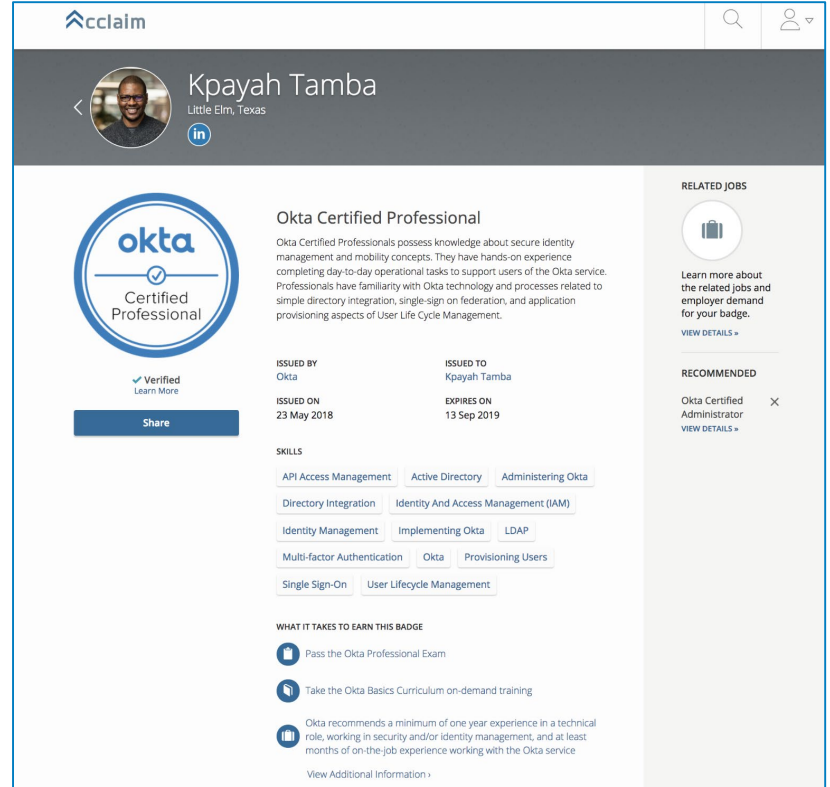
**cclaim**

**Okta**  
in | | f | www

Okta is the leading independent provider of identity for the enterprise. The Okta Identity Cloud enables organizations to both secure and manage their extended enterprise, and transform their customers' experiences. The Okta Certification Program is designed for IT professionals and developers to validate their knowledge, skills, and experience with the use and implementation of the Okta service through examination.

**TOP BADGES**

-  **Okta Certified Professional**  
Okta
-  **Okta Certified Administrator**  
Okta
-  **Okta Certified Consultant**  
Okta



**cclaim**

**Kpayah Tamba**  
Little Elm, Texas  
in

**Okta Certified Professional**

Okta Certified Professionals possess knowledge about secure identity management and mobility concepts. They have hands-on experience completing day-to-day operational tasks to support users of the Okta service. Professionals have familiarity with Okta technology and processes related to simple directory integration, single-sign on federation, and application provisioning aspects of User Life Cycle Management.

**ISSUED BY**  
Okta

**ISSUED TO**  
Kpayah Tamba

**ISSUED ON**  
23 May 2018

**EXPIRES ON**  
13 Sep 2019

Verified  
Learn More

Share

**SKILLS**

- API Access Management
- Active Directory
- Administering Okta
- Directory Integration
- Identity And Access Management (IAM)
- Identity Management
- Implementing Okta
- LDAP
- Multi-factor Authentication
- Okta
- Provisioning Users
- Single Sign-On
- User Lifecycle Management

**WHAT IT TAKES TO EARN THIS BADGE**

- Pass the Okta Professional Exam
- Take the Okta Basics Curriculum on-demand training
- Okta recommends a minimum of one year experience in a technical role, working in security and/or identity management, and at least months of on-the-job experience working with the Okta service

View Additional Information >

**RELATED JOBS**

Learn more about the related jobs and employer demand for your badge.  
VIEW DETAILS >

**RECOMMENDED**

Okta Certified Administrator  
VIEW DETAILS >





get OktaSmart

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Join the OktaSmart Certification Challenge



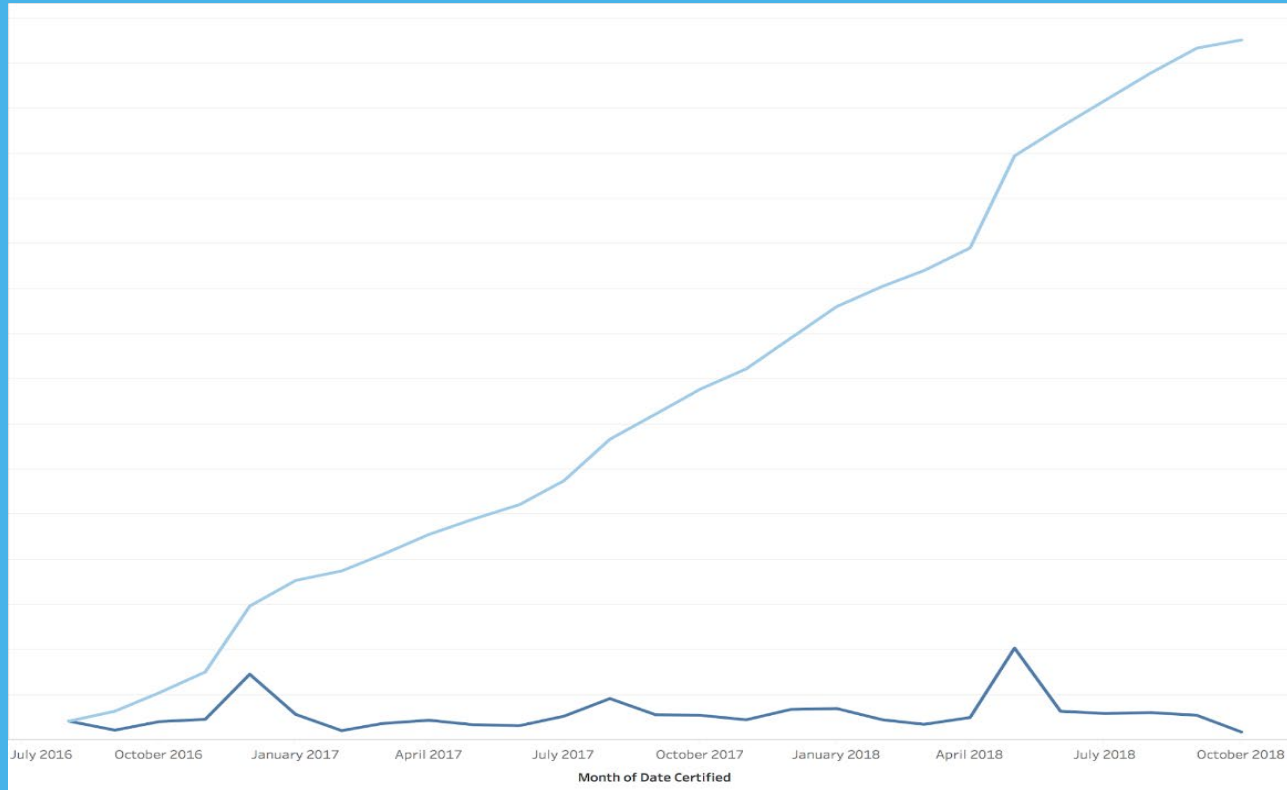
okta



Certified

You will see the results

# Growing # of credentials issued



Running Total vs.  
Certifications Granted  
Monthly

215% YoY Customer & Partner Growth



# Industry recognitions are a nice win too ..CEdMA 2017 Innovation Award!





# Certification Magazine Salary Survey



Ranked

- 9<sup>th</sup> globally
- 18<sup>th</sup> in U.S



Ranked

- 8<sup>th</sup> globally
- 15<sup>th</sup> in U.S

## The Salary Survey 75

This year's Salary Survey included more than 900 certifications. (Seriously, people, stop creating new IT certifications.) This list of 75, ranked by average base salary among U.S. credential holders in 2017, was drawn from the most statistically relevant certs in the survey — those held by the largest numbers of survey respondents. Yes, even years after the last time that you rented a powder blue tuxedo or bought a new dress for the high school prom, life is still a popularity contest. (Some things never change.) The Salary Survey is global, but 56 percent of all respondents this year checked in from the United States, roughly 6 times as many as came from any other country. Accordingly, our results are shown with average U.S. salaries listed separately, followed by an average of all non-U.S. salaries, followed by a global average that combines those two groups. Because of the high volume of U.S. respondents, some certifications yielded a U.S. average but were not held by enough IT professionals from other nations to produce global averages.

CERTIFICATION	SALARY (U.S. ONLY)	SALARY (ALL NON-U.S.)	SALARY (U.S. AND WORLD)
1) Amazon Web Services Certified Solutions Architect – Associate	\$146,960	\$55,380	\$91,580
2) (ISC) <sup>2</sup> Certified Information Systems Security Professional (CISSP) Engineering	\$145,940	N/A	N/A
3) (ISC) <sup>2</sup> Certified Information Systems Security Professional (CISSP) Architecture	\$144,700	N/A	N/A
4) Check Point Certified Security Administrator (CCSA)	\$144,580	\$65,840	\$108,790
5) ISACA Certified in Risk and Information Systems Control (CRISC)	\$143,810	\$107,630	\$131,960
6) ISACA Certified in the Governance of Enterprise IT (CGEIT)	\$142,500	\$103,750	\$127,020
7) IAPP Certified Information Privacy Professional (CIPP)	\$139,380	N/A	N/A
8) (ISC) <sup>2</sup> Certified Cloud Security Professional (CCSP)	\$138,610	\$92,220	\$127,010
9) Cisco Certified Design Professional (CCDP)	\$138,440	\$80,440	\$108,560
10) GIAC Penetration Tester (GPEN)	\$137,360	\$102,500	\$131,430
11) ISACA Certified Information Systems Auditor (CISA)	\$136,160	\$44,000	\$116,160
12) GIAC Certified Intrusion Analyst (GCIA)	\$136,090	\$95,000	\$124,380
13) Microsoft Certified Solutions Associate (MCSA) Cloud Platform	\$135,890	\$59,660	\$94,090
14) ISACA Certified Information Security Manager (CISM)	\$133,980	\$95,240	\$120,410
15) Okta Certified Administrator	\$133,850	\$63,600	\$117,990
16) GIAC Web Application Penetration Tester (GWAPT)	\$133,380	N/A	N/A
17) GRC Professional	\$132,760	\$77,580	\$116,610
18) Okta Certified Professional	\$132,640	\$71,000	\$117,230
19) (ISC) <sup>2</sup> Certified Authorization Professional (CAP)	\$131,100	N/A	N/A
20) (ISC) <sup>2</sup> Certified Information Systems Security Professional (CISSP)	\$131,030	\$90,640	\$115,100



# What's next for the Okta certification program?

- Scale beyond people with 100% automation
- Continue brand awareness
- Bring new advanced certifications to market
- Add some performance-based virtual live lab items to our test forms



Questions?





# okta

Thank you

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