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

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- Director, Certification Program
- Okta

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- 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

/ˈinəˌvāt/

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

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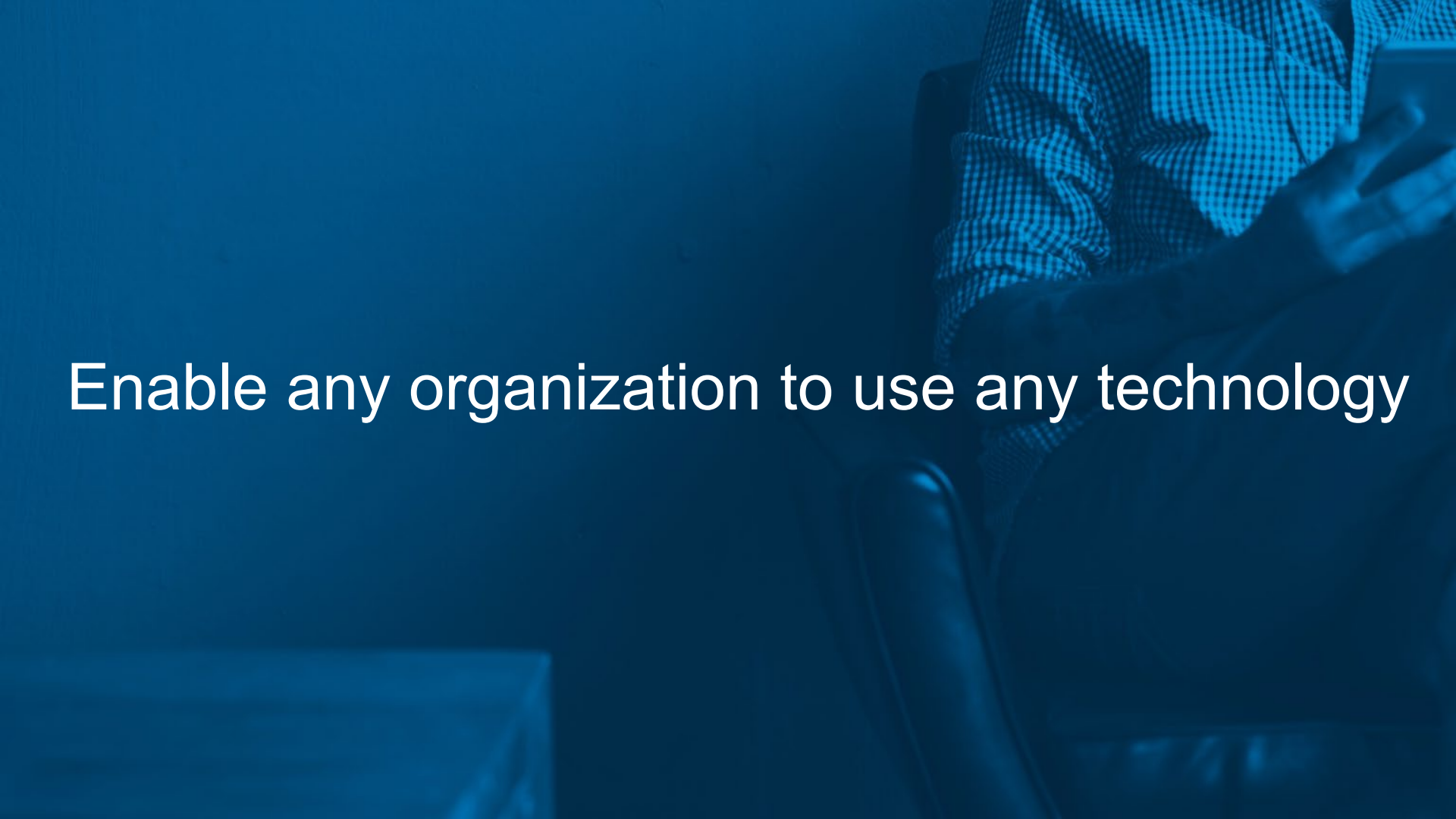
Enable any organization to use any technology

Driving Customer Success by Leading with Learning

Learn

Ramp & certify your team.
Continuous product education.

Deploy

Design your architecture.
Integrate applications.
Go live.

Grow

Expand your architecture.
Grow business value.

Adopt

Use your subscriptions.
Success planning.
Strategic consultation.

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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

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Program criteria…
build a program aligned with Okta's brand

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

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

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

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

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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

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We had to make a decision

So, how did the project unfold?

Three innovators with deep domain expertise…

caveon™ Test Security	examity® BETTER TEST INTEGRITY.	okta
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

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…but there was a lot to do…

caveon™ Test Security

examity® BETTER TEST INTEGRITY.

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- 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

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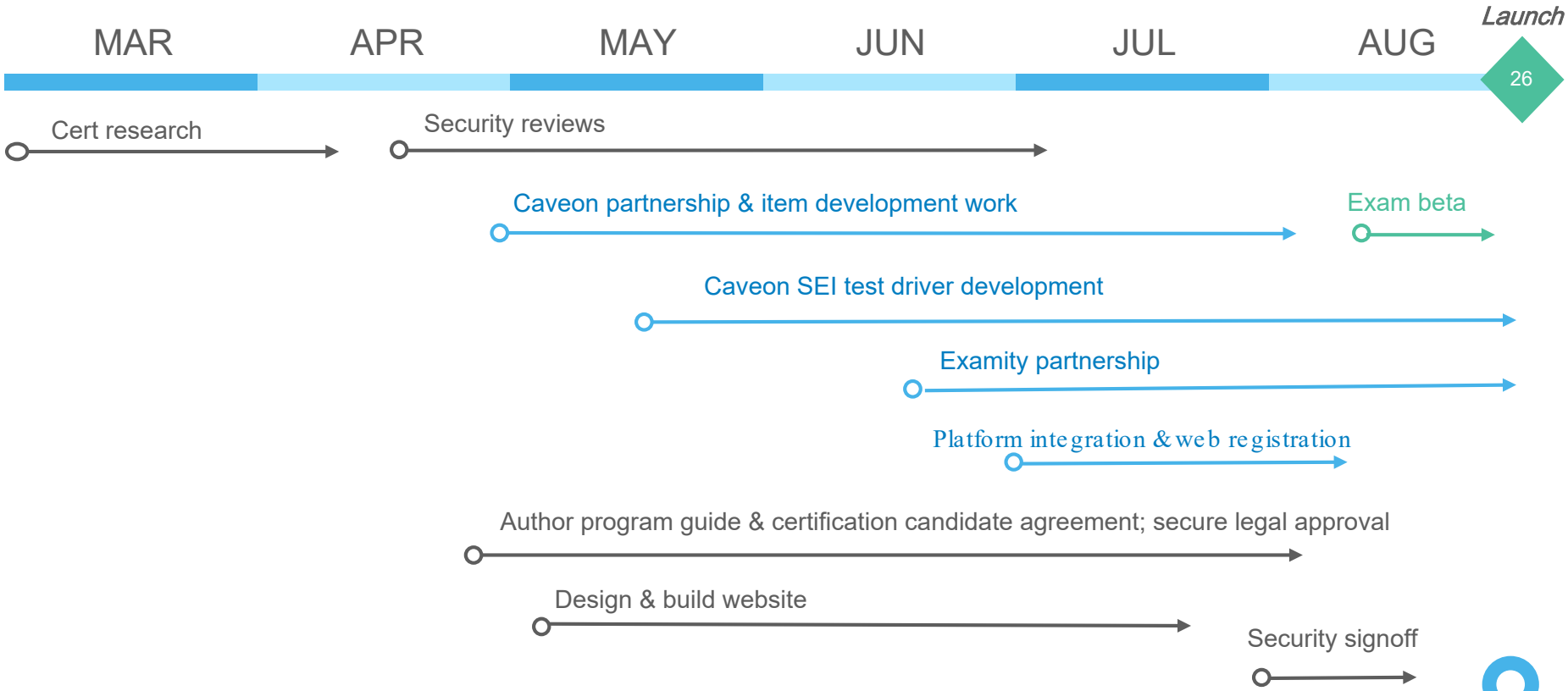
… and an aggressive timeline.



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A unified team with synergistic goals

caveon™ Test Security

examity® BETTER TEST INTEGRITY.

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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

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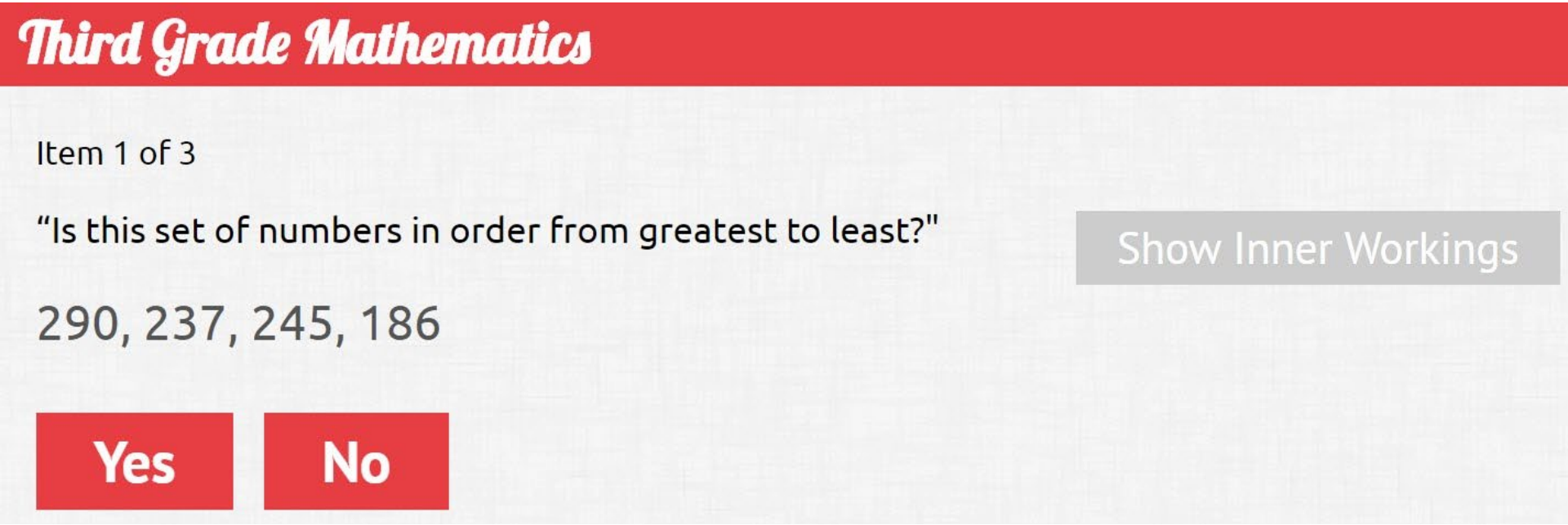
Discrete Option Multiple Choice (DOMC) is at the core of our innovation

Dave Foster

Ph.D., Chairman and CEO, Caveon

DOMC Patent Holder

How DOMC Works



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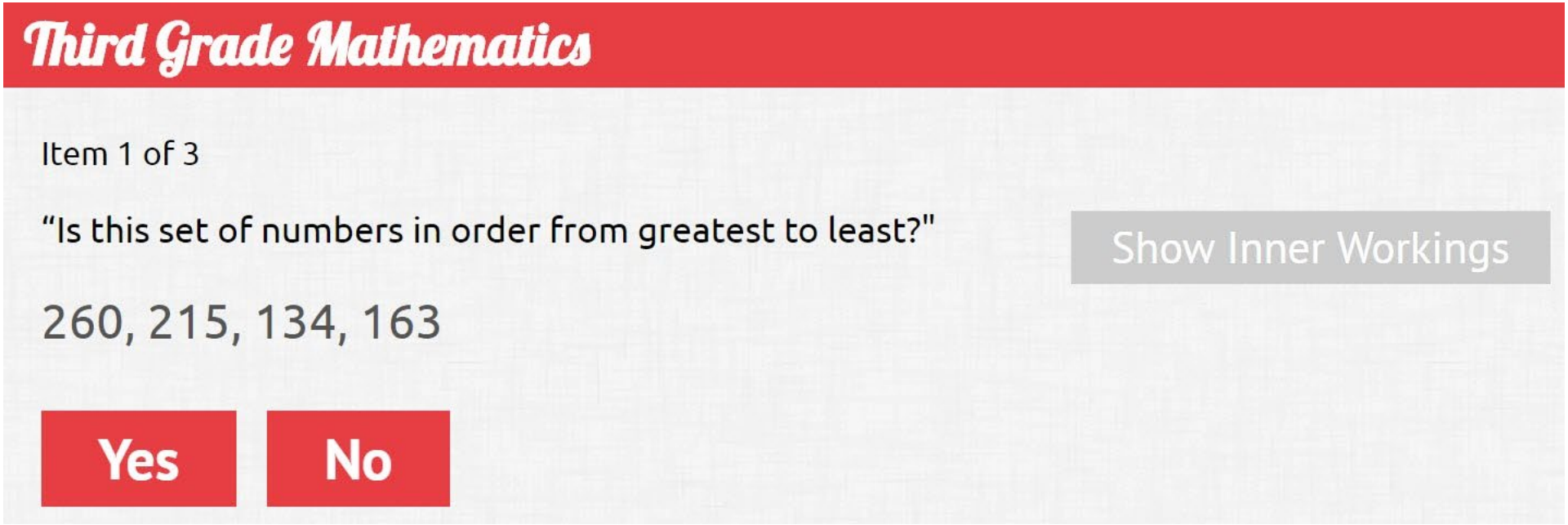
How DOMC Works (Continued)



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Okta Professional Practice Exam

okta

Submit & End Exam

0:16:22 Remaining

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

Okta Professional Practice Exam

okta

Submit & End Exam

0:16:22 Remaining

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

Okta Professional Practice Exam

okta

Submit & End Exam

0:15:51 Remaining

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

Okta Professional Practice Exam

Submit & End Exam

0:16:02 Remaining

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

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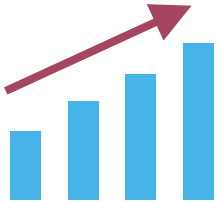
Why DOMC?

DOMC items are easier to read.

The DOMC format increases the validity of test scores.



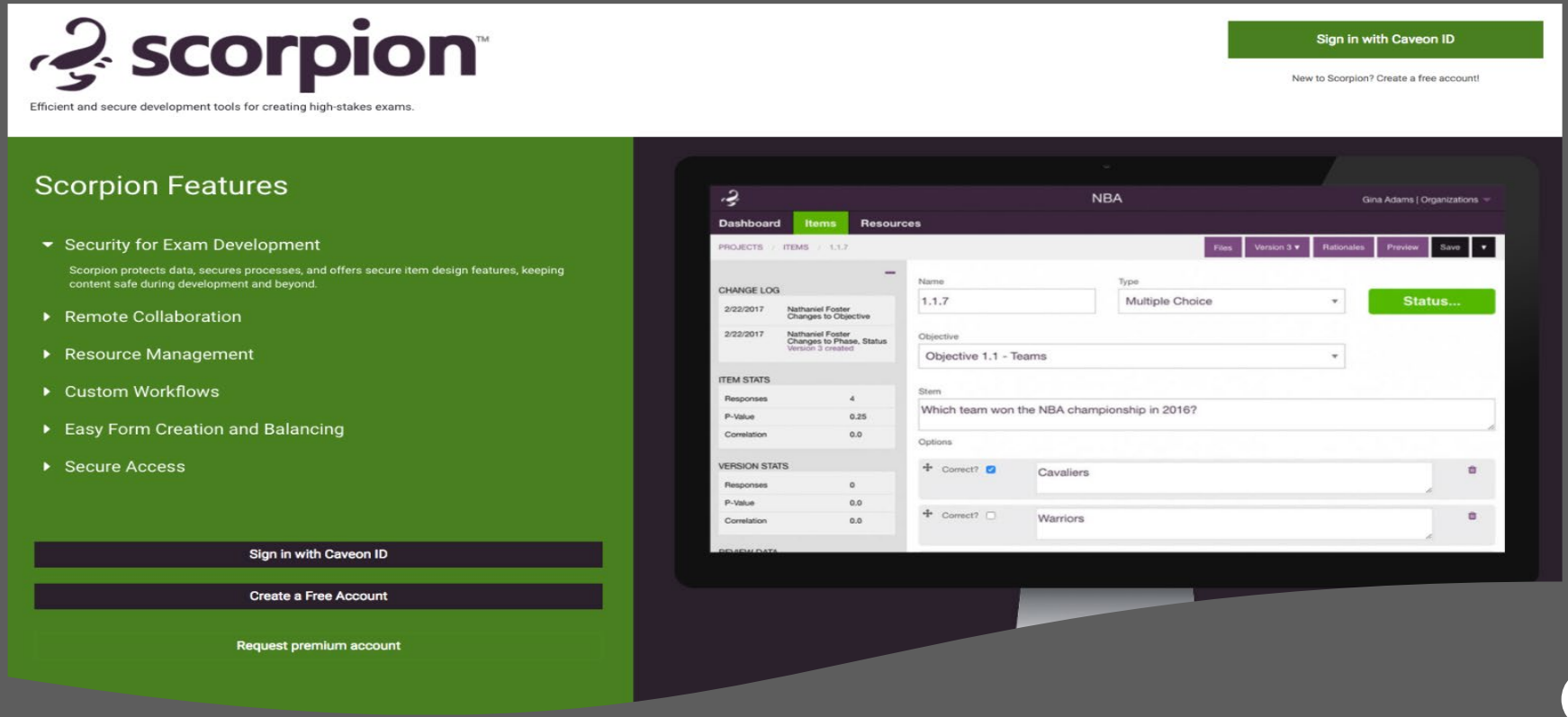
Reduces the probability of getting the correct answer simply by elimination.

The DOMC item format helps prevent item theft and cheating.

Core Technologies

Scorpion - Item Authoring and Item Banking

caveon™ Test Security



Scorpion features

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

SEI- Test Driver

caveon™ Test Security

SEI SECURE EXAM INTERFACE

Deliver exams that are protected against cheating and theft.

Sign in with Caveon ID

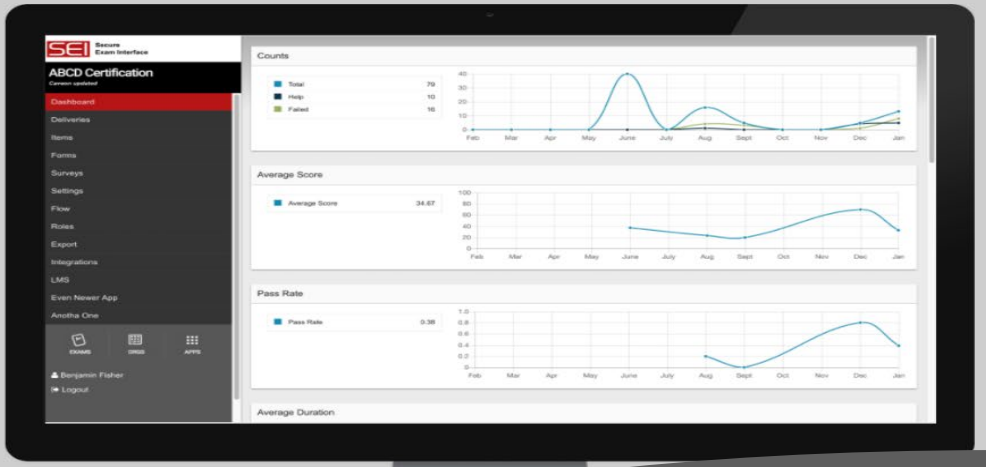
Request a free demo

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

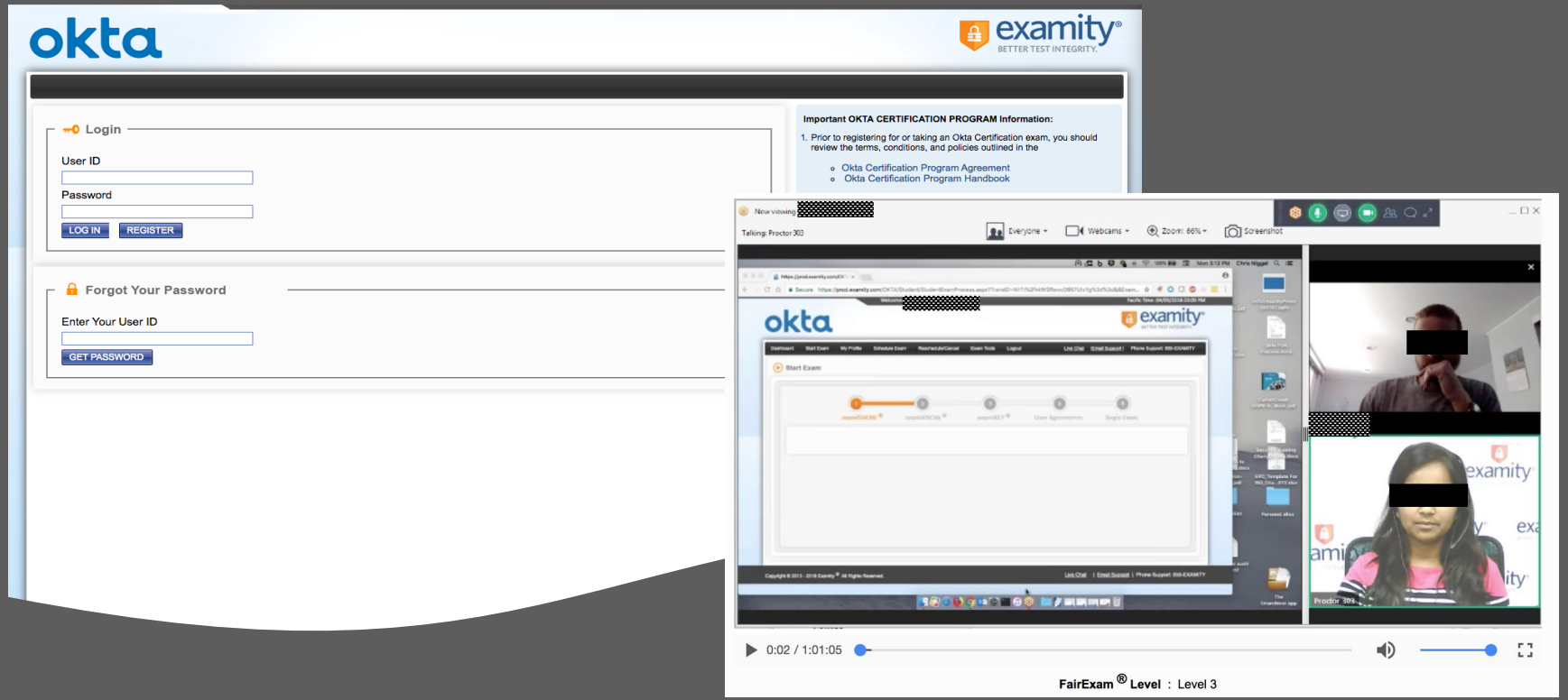


SEI features

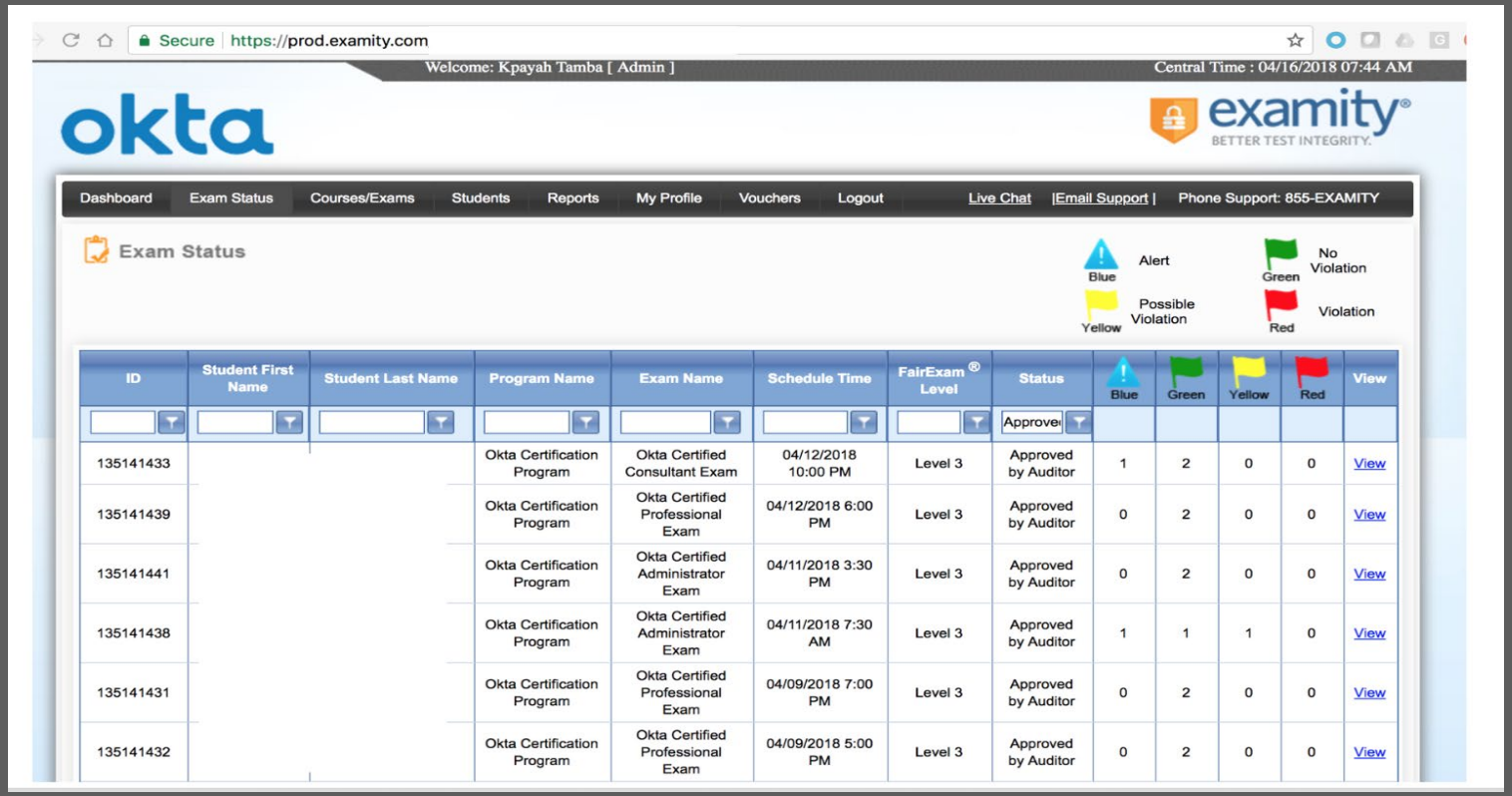
- Secure Platform– SOC2 Certified
- Rapid, self-publishing and re-publishing
- Integrated with remote proctor
- Emulates lockdown browser functionality
- On-screen watermarking, as well as content/presentation based search tools for exposed content (if discovered)
- Secure Access

SEI- Live Demo

Test Registration & Proctoring



Testing session review & flags



ID	Student First Name	Student Last Name	Program Name	Exam Name	Schedule Time	FairExam ® 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	View
135141439			Okta Certification Program	Okta Certified Professional Exam	04/12/2018 6:00 PM	Level 3	Approved by Auditor	0	2	0	0	View
135141441			Okta Certification Program	Okta Certified Administrator Exam	04/11/2018 3:30 PM	Level 3	Approved by Auditor	0	2	0	0	View
135141438			Okta Certification Program	Okta Certified Administrator Exam	04/11/2018 7:30 AM	Level 3	Approved by Auditor	1	1	1	0	View
135141431			Okta Certification Program	Okta Certified Professional Exam	04/09/2018 7:00 PM	Level 3	Approved by Auditor	0	2	0	0	View
135141432			Okta Certification Program	Okta Certified Professional Exam	04/09/2018 5:00 PM	Level 3	Approved by Auditor	0	2	0	0	View

Outcomes and achievements

Okta Certification Program

KNOWS & SUPPORTS	ADMINISTERS & MANAGES	IMPLEMENTS & CONFIGURES	* BUILDS CUSTOM INTEGRATIONS	* ARCHITECTS SOLUTIONS
…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

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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

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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 “DOMG-first” lens

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The final solution met all criteria

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

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

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

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

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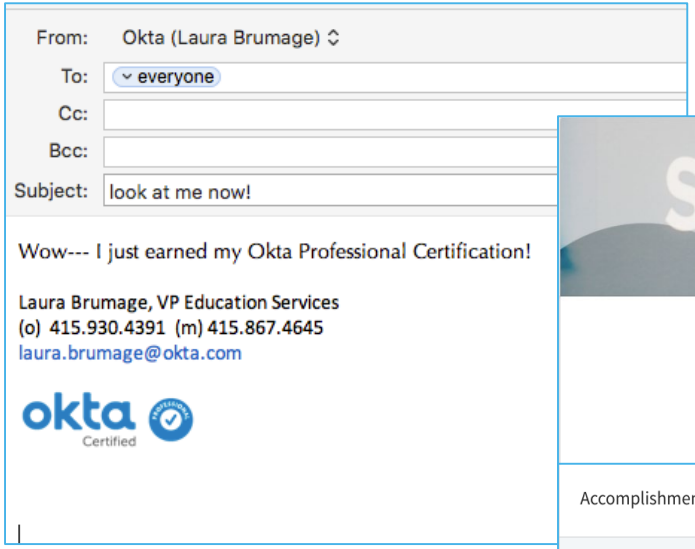
If you build it, will they come?

No - It is not that simple

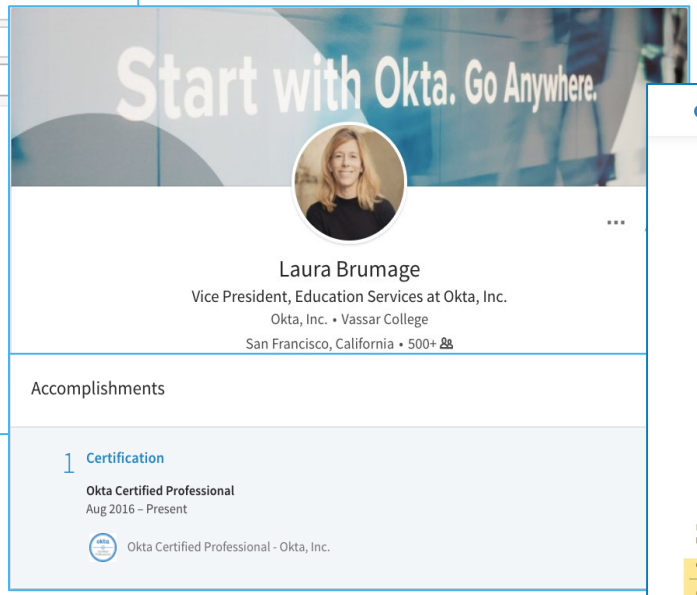
Drive Program Awareness

Program promotion is job #1

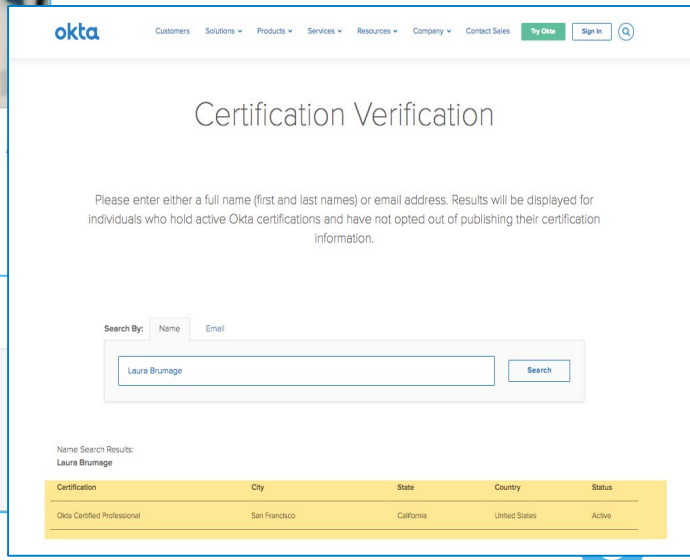
Email signature branding



Certification Logos and Badges in Social Media Profiles



Certification look -up verification tool



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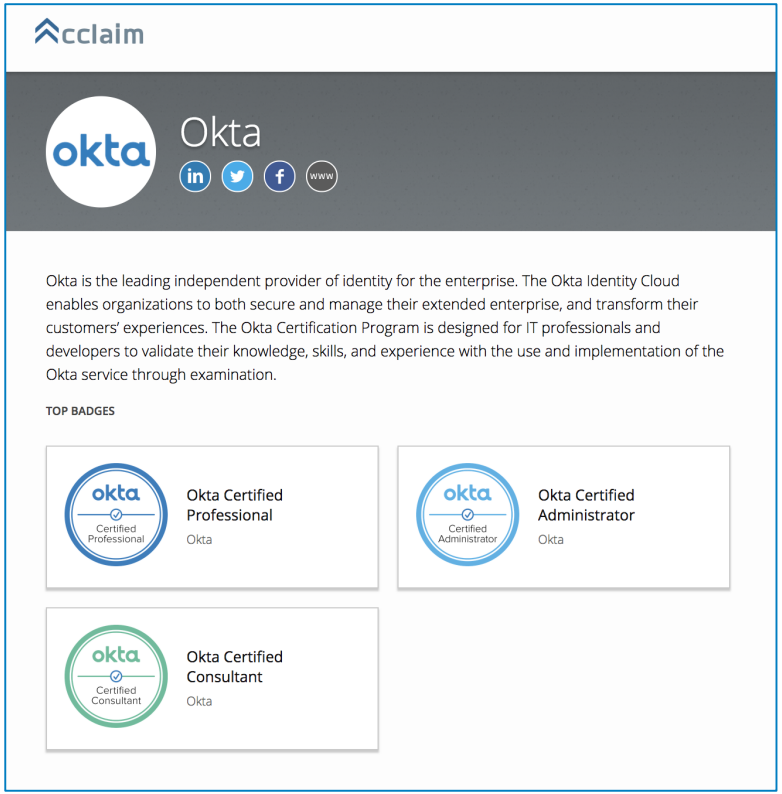
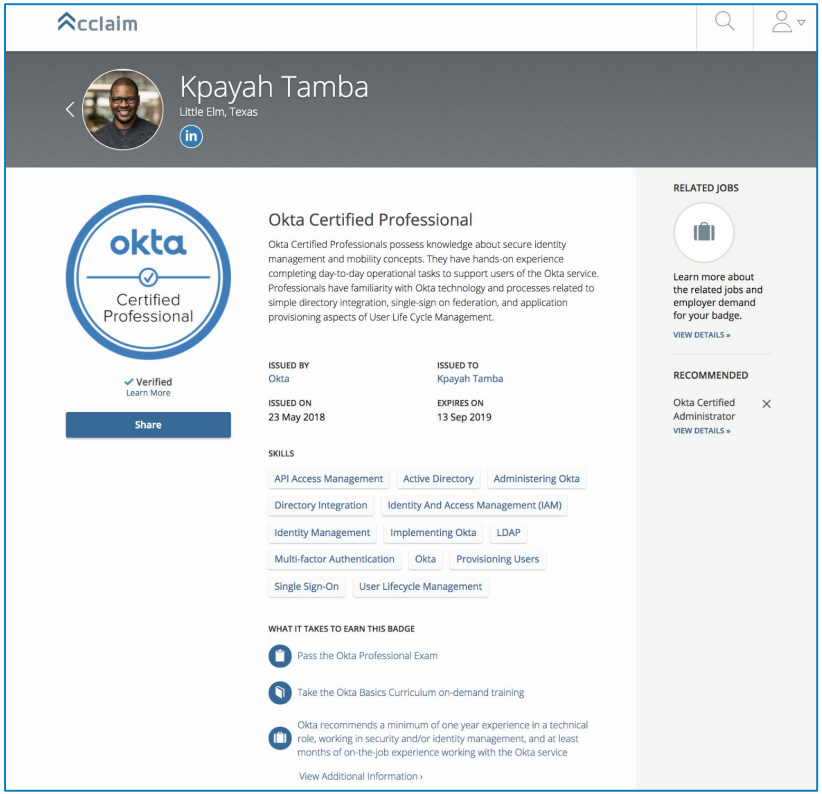
Use tools like digital badges





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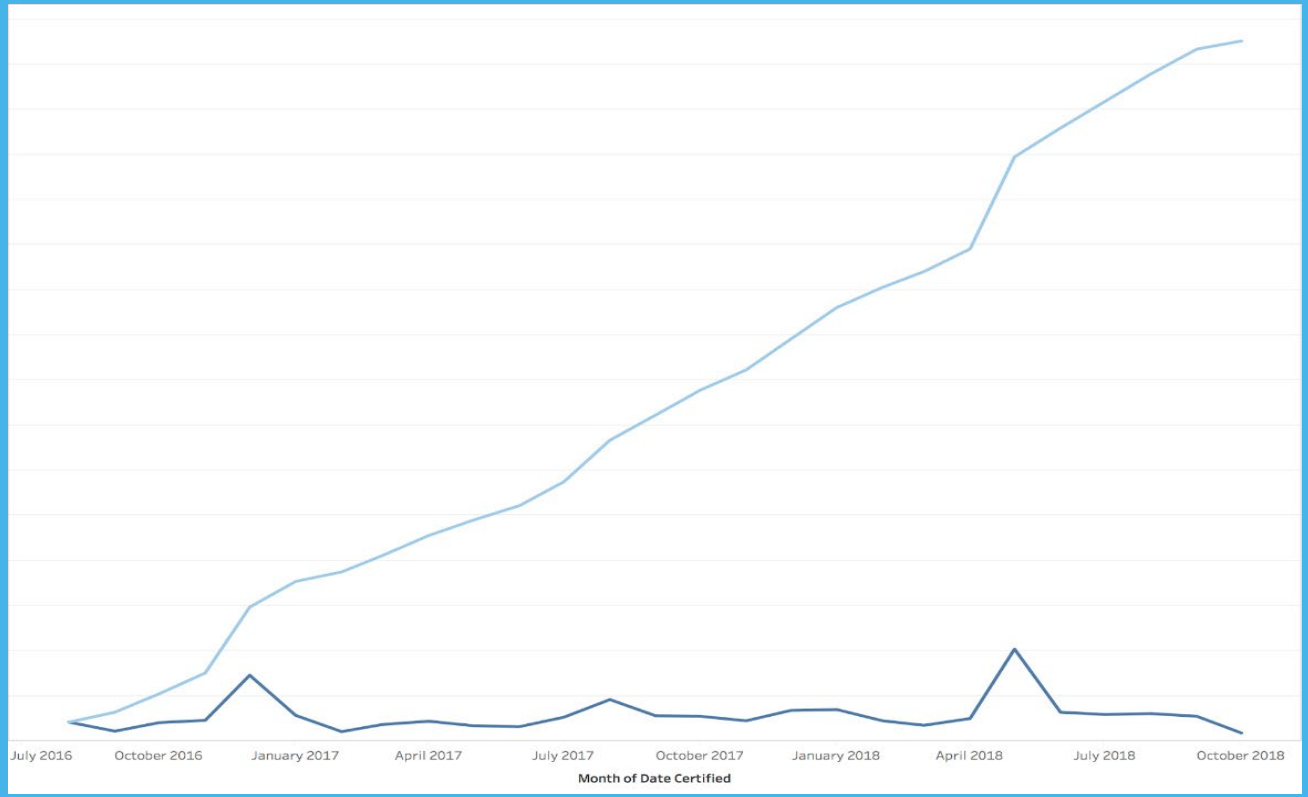
get OktaSmart

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!

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Certification Magazine Salary Survey

Ranked

- 9th globally
- 18th in U.S

Ranked

- 8th globally
- 15th 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)² Certified Information Systems Security Professional (CISSP) Engineering	$145,940	N/A	N/A
3) (ISC)² 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)² 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)² Certified Authorization Professional (CAP)	$131,100	N/A	N/A
20) (ISC)² Certified Information Systems Security Professional (CISSP)	$131,030	$90,640	$115,100

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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

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Questions?

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