CMS and What Makes an Agency Ready for Security Automation with OSCAL?

A Vendor's View

Presented by:
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Just Stepping In...

Experienced Vendor & Ex Federal Employee

- **Presentational substitute** for Andrés Colón, Senior Technical Analyst, Office of Information Technology, EADG / TEA, CMS
- Not representing CMS
- Speaking as a vendor in the Compliance as Code space
- Not selling anything

Brief Bio

Greg Elin, CEO, CAC Vendor

- Former Chief Data Officer at FCC (GS-15)
- Multiple agencies exploring Compliance as Code
- Avid member of the Compliance as Code community

Introduction

Part of U.S. Department of Health and Human Services (HHS).

Over 200 SSP's within the agency.

Lots of organization information online.

Large ATO Improvement Project

CMS pursuing a large effort to improve ATO process.

Multiple projects, teams, and vendors

Part of CMS's **BlueSky Initiative**.

The BlueSky Initiative was conceived to conceptualize and capture what an ideal and effective security process would encompass to benefit people, build secure systems and minimize the risk to CMS's mission. Rapid ATO is one of the projects coming out of the Blue Sky Security Initiative at CMS

Courtesy of CMS

Concrete Next Steps

In the 12 months we are focusing on:

1. **Incorporate human centered design** and agile best practices throughout the modernization lifecycle
2. Begin **demystifying** the authorization event for product teams
3. **Reduce** the **burden** in writing control compliance descriptions
4. **Pilot initiatives** to guide teams through authorization
5. **Pilot tools to help developer** build more secure software
6. **Map business processes** and identify opportunities for improvements, designing with our users solutions that actually meet their needs
7. **Promote cross-functional collaboration** of leaders of emerging best practices

Slide Courtesy of CMS

What CMS had Accomplished So Far

Procurement

- **Established OIT Security Pilot.** Identified over 1500+ high security vulnerabilities in public CMS open source software.
- **Rapid ATO Procurement.**
- TEA worked with OAGM and ISPG to establish a procurement strategy to make incremental progress on the tactical next steps discussed in this presentation. Contract started on 9/30/2020.

Community Engagement

- **Created the Compliance as Code Workgroup**.
- **Engaged CMS Business Units, NIST, USDS, DHS, US Navy and others for security cross-pollination initiatives.**
- **Participating in the On-going Authorization Workgroup.**
- **Established the CMS Slack Chat #security_community. 70+ security experts from CMS.**

Skill Building

- **Trained teams on how to perform automated system composition analysis to identify vulnerabilities with the Snyk Pilot.**
- **Helped organize brown bags on security best practices.**

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Opportunity ✨

Standardized, reusable templates will greatly simplify SSP creation.

- *“To give people that TurboTax experience, **you need a library of pre-written control content** for all of the different components that people would commonly use.”*
- *“You're going to want to make as much of that [security documentation] **reusable as possible**, so one of my goals has been to make templates and make them as generic as possible”*
- *“If you know that you have a similar SSP, you can **grab that as a template to start with.**”*

Slide Courtesy of CMS

Projects with Vendors

- **Adopting OSCAL**

  Analyzing existing corpus of SSP's using NLP (Natural Language Processing) and participating in OSCAL community.

- **Creating an Initial Library of "Certified Control Sets"**

  Commitment to create large enough sample library of components to viably test reuse and automation.

- **Automated Evidence Gathering**

  Provided evidence and compliance as a service so ADO (Application Development Organization) gets evidence early in SDLC (System Development Life Cycle).

Certified Sets

What is a “Certified Set”?
A set of technologies that have been pre-approved / vetted and can be reused. Includes language, sample implementation, plain language, and attestation.

Why it Matters?

Providing certified Sets provides business owners with a standard that increases the potential for re-use, automation and collaboration.

Think of a Certified Set as pre-approved building plan

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Agency Readiness for CAC

01

Sharing Culture

The culture at CMS mirrors the spirit of compliance as code. Information is shared online and publicly. Access to resources is a cultural norm.

02

Active Teams

Teams are motivated and involved in the creation of policies.

03

Expertise (CAC and Tools)

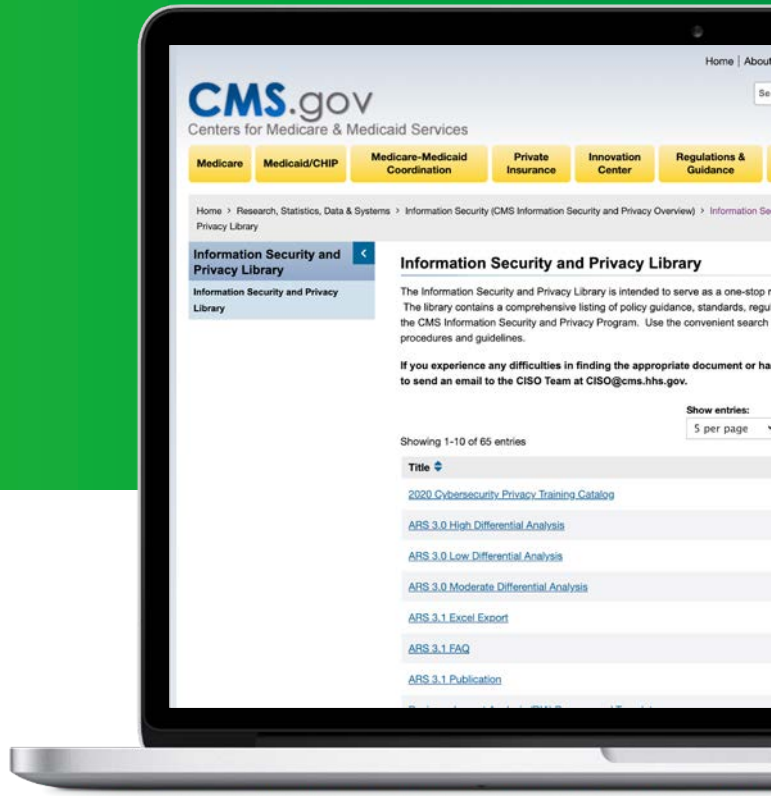
CMS teams are experienced in git repositories, collaborative spaces, and vendor chats. Expertise in these areas impacts compliance as code thinking in organizations.

04

Champions

The executive level at CMS is engaged in the CAC project. CMS leaders regularly attend presentations as well as regular meetings. The project leads are similarly empowered and enthusiastic by CAC.

Centers for Medicaid and Medicare Services shares the complete Information Security and Privacy Library on CMS.gov. The site provides a comprehensive listing of policy guidance, standards, regulations, laws, and other documentation related to the CMS Information Security and Privacy Program.



Who CMS collaborates with

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Major Parties involved in Compliance

Implement and document system implementation

Review system documentation and implementation, create assessment

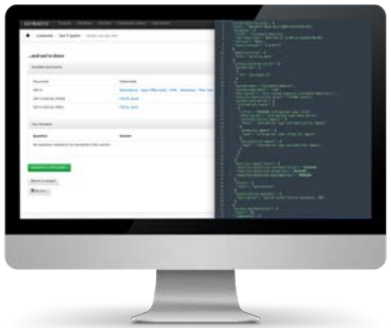
Review security assessment, grant ATO

Information System Security Officer

Manages System Security and Risks

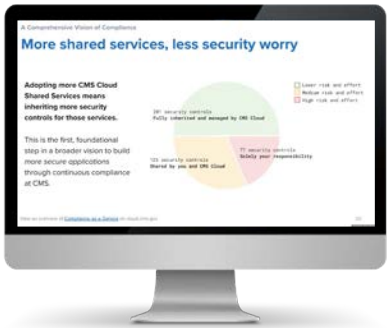
Slide Courtesy of CMS

Sample Vendor Partners & Projects



GovReady CivicActions

Fearless



CMS CaaS

MITRE

NIST Ad Hoc Others

Agency Patterns

Any agency looking to create a compliance as code initiative needs to be aware of the mindsets and resources that are needed for an implementation of CAC to be successful and impactful for an organization.

Ideal

Paradigms and Processes for Success

- Vision
- Concrete Steps
- CAC Experience
- IT Committed to Removing Pain
- Budget
- Examples:
  - CMS, USDA

Challenging

Pitfalls and Obstacles

- “Just Looking”
- Vague direction
- Try one or two systems
- Little or no budget

Federal Agency and OSCAL
Vendor's Perspective

Essential

Executive Buy-in

Champions

Funding

Access to Some Content

Shared Developer Environment

Access to Existing GRC Tools

Better

Vision

Community Engagement

Access to Lots of Content

Easy-to-Use Developer Environment

Compliance as Code Experience

Time

Best

Executive Participation

Human-Centered Design

Active User Testing

IT Wanting to Relieve Pain

Not Vendor Driven

Incremental Value

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Why this Matters

Support with Transformation

Incremental Value

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