NICE
NATIONAL INITIATIVE FOR
CYBERSECURITY EDUCATION

NIST & NICE
Cybersecurity Frameworks
Rapid Adoption & Workforce Upskilling Programs

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Agenda and Objectives

- NIST & NICE Cybersecurity Frameworks
- NIST Cybersecurity Professional (NCSP) Certification Training
- NIST-CSF FastTrack™ Enterprise Cybersecurity Program
- HPC CyberMatch™ – Rapid Workforce Upskilling & Staffing Platform
- NIST & NICE Cybersecurity Summary

NIST & NICE Definitions

- **NIST** – National Institute of Standards and Technology
  Department of Commerce agency responsible for creating federal standards and guidelines for the government an industry

- **NCSF** - NIST Cybersecurity Framework
  Standard for Cybersecurity & Risk Management created by NIST under executive order from president Obama and Trump.

- **NICE** – National Initiative for Cybersecurity Education
  Created by NIST to energize and promote a robust network and an ecosystem of cybersecurity education, training, and workforce development

- **NCWF** – NICE Cybersecurity Workforce Framework
  Created by NIST/NICE and is a national focused resource that categorizes and describes cybersecurity workforce roles and credentials (degrees, certifications, skill badges) based on knowledge, skills and abilities

NIST & NICE Cybersecurity Frameworks

- Created to provide a uniform standard that government and businesses could adopt to guide their cybersecurity activities and risk management programs.
- From which the NICE Cybersecurity Workforce Framework was created
  - To identify the human capital requirements and standards that NIST requires for a successful deployment.
  - Providing a common, consistent lexicon
  - Help employers in creating a cybersecurity workforce capable of engineering, maintaining and continually improving a cybersecurity program based on the NIST Cybersecurity Framework.
- The combined NIST/NICE Frameworks have now been approved as the governing framework for Cybersecurity for the US government along with a growing number of critical infrastructure sectors and international governments.

NIST
National Institute of Standards and Technology

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NIST Cybersecurity Framework

- Published by NIST under executive order
- Based on delivering business outcomes by managing Cybersecurity risk

- **Framework covers 3 main areas**
  - **Core**
    - Describes common desired outcomes
    - Expressed as functions
  - **Implementation**
    - Describes how cybersecurity is practiced
    - Informed by business needs
  - **Profiles**
    - Aligns “core” with resources & tolerances
    - Used to define current state & future state

NIST
National Institute of Standards and Technology

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NIST Cybersecurity Framework Status

- **Adoption by country**
  - United States
    - » NCSF is now mandatory for Federal Agencies per EO May 2017
    - » NCSF is now a Regulatory Requirement for all financial service companies
    - » Some States are providing Safe Harbor for organizations using the NCSF
    - » Federal legislation being discussed on making NCSF mandatory for all
  - Over 29 countries have adopted NCSF
  - Japan and Australia has made NCSF a central pillar of their program

- **Enterprise Adoption**
  - General Motors, USAA Insurance, Yale University
  - Santander Bank
  - British Telecomm
  - Many others now and many others will follow

- **CMMC**
  - Carnegie Mellon and John Hopkins – First Industry cyber security maturity model certification
  - Expected to be adopted on a massive scale
  - CMMC is on the FastTrack to becoming the Cybersecurity Maturity Model for all.

NICE Cybersecurity Workforce Framework

No.	NCWF Category	Category Description	Related CSF Functions
1	Securely Provision (SP)	Conceptualizes, designs, and builds secure information technology (IT) systems, with responsibility for aspects of systems and/or networks development.	Identify (ID) Protect (PR)
2	Operate and Maintain (OM)	Provides the support, administration, and maintenance necessary to ensure effective and efficient information technology (IT) system performance and security.	Protect (PR) Detect (DE)
3	Oversee and Govern (OV)	Provides leadership, management, direction, or development and advocacy so the organization may effectively conduct cybersecurity work.	Identify (ID) Protect (PR) Detect (DE) Recover (RC)
4	Protect and Defend (PR)	Identifies, analyzes, and mitigates threats to internal information technology (IT) systems and/or networks.	Protect (PR) Detect (DE) Respond (RS)
5	Analyze (AN)	Performs highly specialized review and evaluation of incoming cybersecurity information to determine its usefulness for intelligence.	Identify (ID) Detect (DE) Respond (RS)
6	Collect and Operate (CO)	Provides specialized denial and deception operations and collection of cybersecurity information that may be used to develop intelligence.	Detect (DE) Protect (PR) Respond (RS)
7	Investigate (IN)	Investigates cybersecurity events or crimes related to information technology (IT) systems, networks, and digital evidence.	Detect (DE) Respond (RS) Recover (RC)

- Released in November of 2016
- Provides a common Lexicon for defining a Cybersecurity workforce
- Describes and categorizes roles and responsibilities
- 7 Categories, 52 work roles and 32 specialty roles
- Mandatory for Federal Agencies & DoD per EO since May 2019
- Expected to become the de-facto standard for the Cybersecurity as ITIL did for Service Management

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NIST Cybersecurity Professional (NCSP) Certification Training Programs

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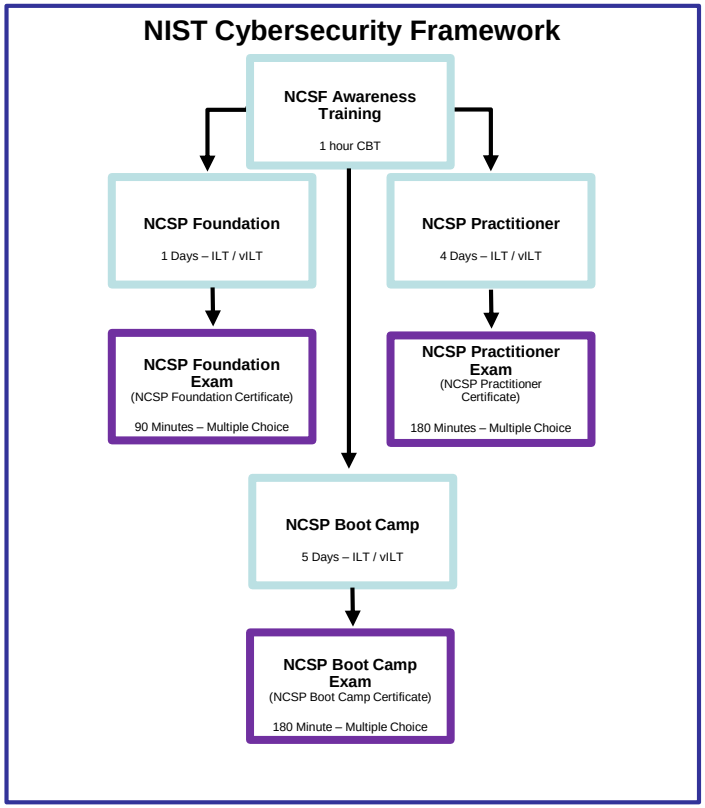
NIST Cybersecurity Professional (NCSP) Courses

- **NCSF Awareness Training**
- **NCSP Certificated Training with Exam**
  - Foundation: Requires no prior experience.
  - Practitioners: Experience in IT and Security is recommended
  - Boot Camp (Foundation + Practitioner) with one exam

- **Content Formats**
  - **Print**
  - **Digital Book**
  - **Self-Paced Video**

- **Delivery Formats**
  - Instructor Led Classroom
  - Virtual Instructor Led Classroom
  - Self-Paced
  - Blended (Self-Paced + Instructor Led Review Session)



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NCSF Awareness Training

- NCSP Awareness training course introduces candidates to the concepts of
  - Digital Transformation
  - Cybersecurity Risk Management
  - NIST Cybersecurity Framework

Number of Classroom Hours: 2 Hours
Number of Video Hours: 1
Credentials Attained: Certification, 1 PDU's & CEU's
Location of Training: Onsite, Online or Self-Paced
Means of Instruction: Classroom, V-Classroom, Video

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NCSP Foundation Certification

- NCSP Foundation training course outline
  - Current cybersecurity challenges
  - How implementing a NIST-CSF program can mitigate these challenges.

Classroom Hours: 8 (1 Day)
Video Hours: 4
Credentials Attained: Certification, 8 PDU's & CEU's
Location of Training: Onsite, Online or Self-Paced
Means of Instruction: Classroom, V-Classroom, Video

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NCSP Practitioner Certification

NCSF Practitioner

- Explains in detail how to engineer, operate and improve the technical and business functions of an NIST-CSF program.

Classroom Hours: 32 (4 days**)**
Video Hours: 12
Credentials Attained: Certification, 32 PDU's, CEU's
Location of Training: Onsite, Online or Self-Paced
Means of Instruction: Classroom, V-Classroom, Video

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NCSP Boot Camp Certification

- This combined NCSP program outlines:
  - Current cybersecurity challenges
  - Explains detail how to engineer, operate and improve the technical and business functions of a NIST-CSF program.

- **Classroom Hours:** 40 (5 days)
- **Video Hours: 16**
- **Credentials Attained:** Certification, 40 PDU's, CEU's
- **Location of Training:** Onsite, Online or Self-Paced
- **Means of Instruction:** Classroom, V-Classroom, Video

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NIST-CSF FastTrack™
Enterprise Cybersecurity Program

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NIST-CSF FastTrack™ Overview

- The NIST Cybersecurity FastTrack™ program provides a turn-key solution of accredited certification training, mentoring and risk management automation designed to facilitate the rapid adoption of the NIST Cybersecurity Framework across an enterprise and its supply chain.

- The program is centered around learning the knowledge, skills and abilities to operationalize and automate all aspects of a NIST Cybersecurity program including assessments, project plans, workforce assignments, workforce training, status reports and real-time continuous monitoring and improvement.
    - The program includes:
        - The accredited NCSP Boot Camp Practitioner training program
        - Access and use of the CyberStrong™ Integrated Risk Management Platform (12 month license).

NIST-CSF FastTrack™ Deliverables

- NCSP Boot Camp Training for the NIST-CSF Design/Engineering Team
- NIST-CSF Assessment, Management & Automation Platform Training
- NIST/NICE Enterprise Cybersecurity Workforce Assessment
- NIST/NICE Cybermatch Upskilling Program
  - Certification Training (Cybersecurity Knowledge)
  - Practice Labs Training (Cybersecurity Skills)
  - Virtual Internship Team Training (Cybersecurity Abilities/Experience)
- NIST/NICE CyberMatch™ New Hire Staffing Marketplace

NIST-CSF FastTrack™ Target Markets

- Cybersecurity
- Information Technology
- Healthcare
- Financial Services
- Legal
- Government
- Insurance
- PR & Marketing
- Energy
- Communications
- Advanced Manufacturing
- Defense Industrial Base
- Emergency Services
- Food & Agriculture
- Transportation

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NIST-CSF FastTrack™
CyberStrong Management Platform

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The CyberStrong Story

Automated, Intelligent Cybersecurity Compliance and Risk Management

George Wrenn, CyberSaint CEO and Founder, channeled his experience as the CSO of Schneider Electric, as an Consultant for the Fortune 100, and his involvement in NIST Cybersecurity Framework development to launch CyberSaint Security.

We empower our customers to leverage powerful technology that enables measurement, enhances communication and improves cybersecurity resiliency.

CyberSaint SECURITY

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The CyberStrong Platform

CyberSaint SECURITY

Vendor Risk Management

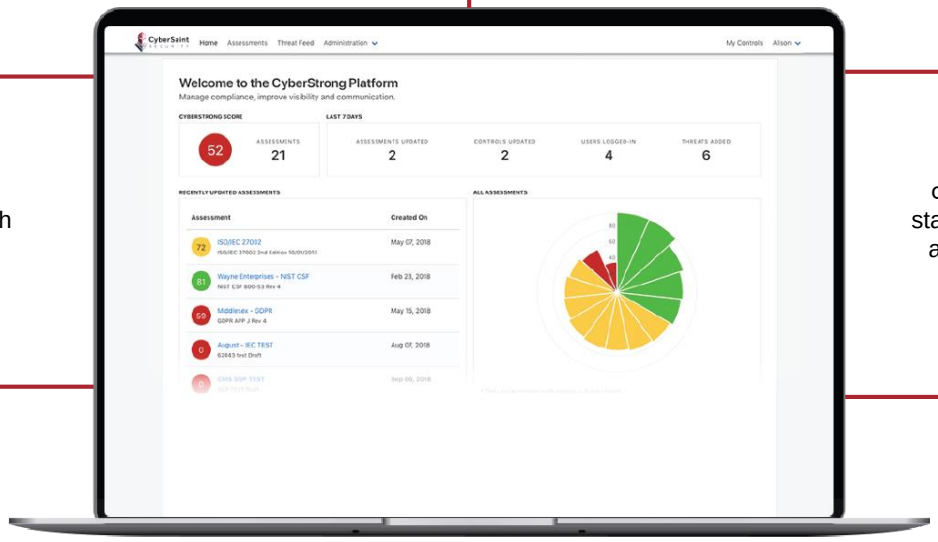
CyberStrong automates the standardization of security and risk assessments, risk quantification, business impact analyses and reporting across third parties, partners, and vendors to uncover unknown risks.

IT Risk Management

CyberStrong protects infrastructure with actionable threat intelligence, risk quantification, and optimized plans that provide the lowest cost, highest impact path to securing an enterprise.

Audit Management

CyberStrong reduces manual effort in the auditing process by delivering audit-ready reports and optimized remediation plans that require no human effort to produce.



Digital Risk Management

CyberStrong helps enterprises manage risk confidently with scalability and flexibility that keeps them up to speed with digital transformation, and the evolving threat landscape.

Compliance Management

CyberStrong gives visibility into an organization's posture projected across standards, eliminating manual effort across assessments, and delivering automated plans that will lower risk.

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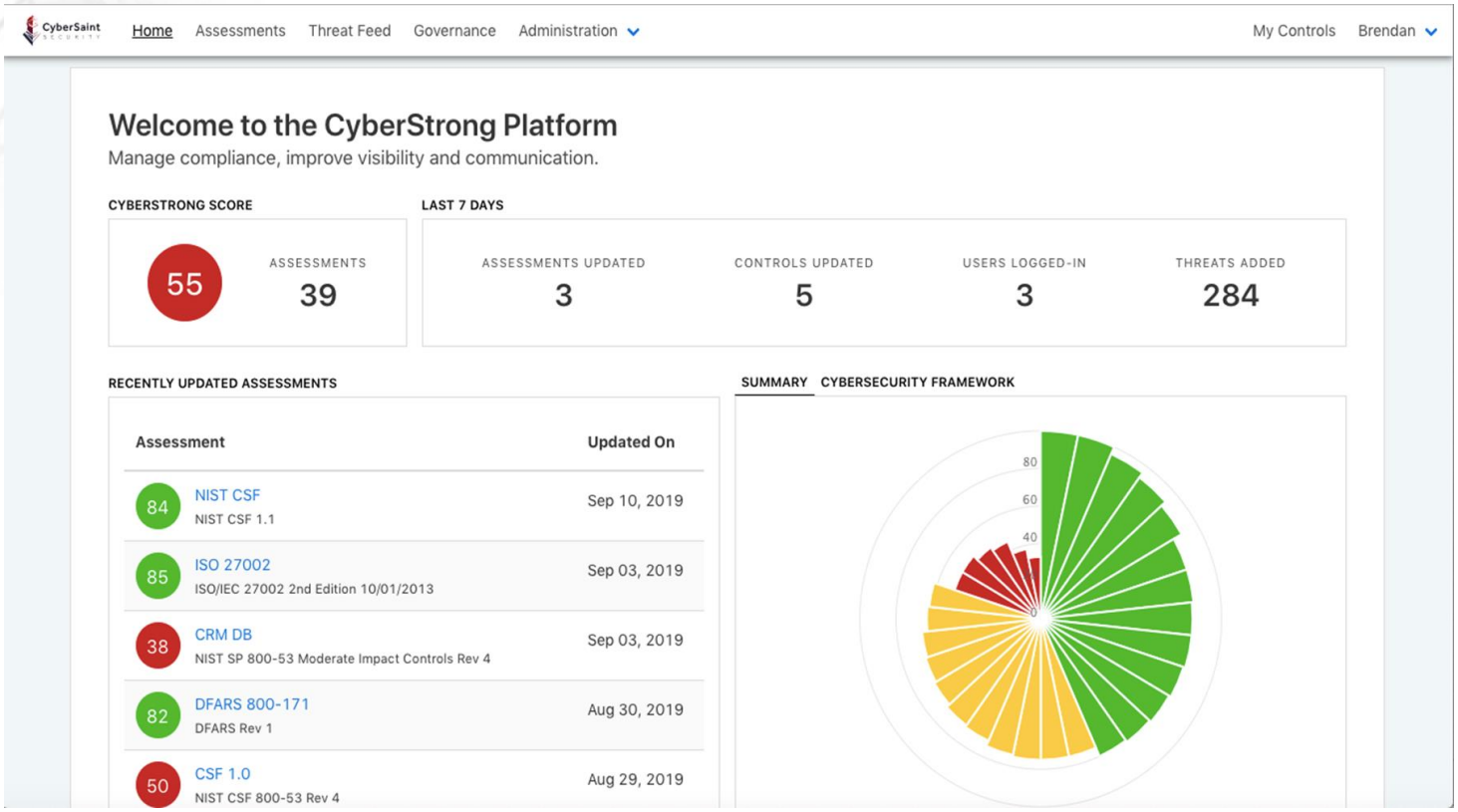
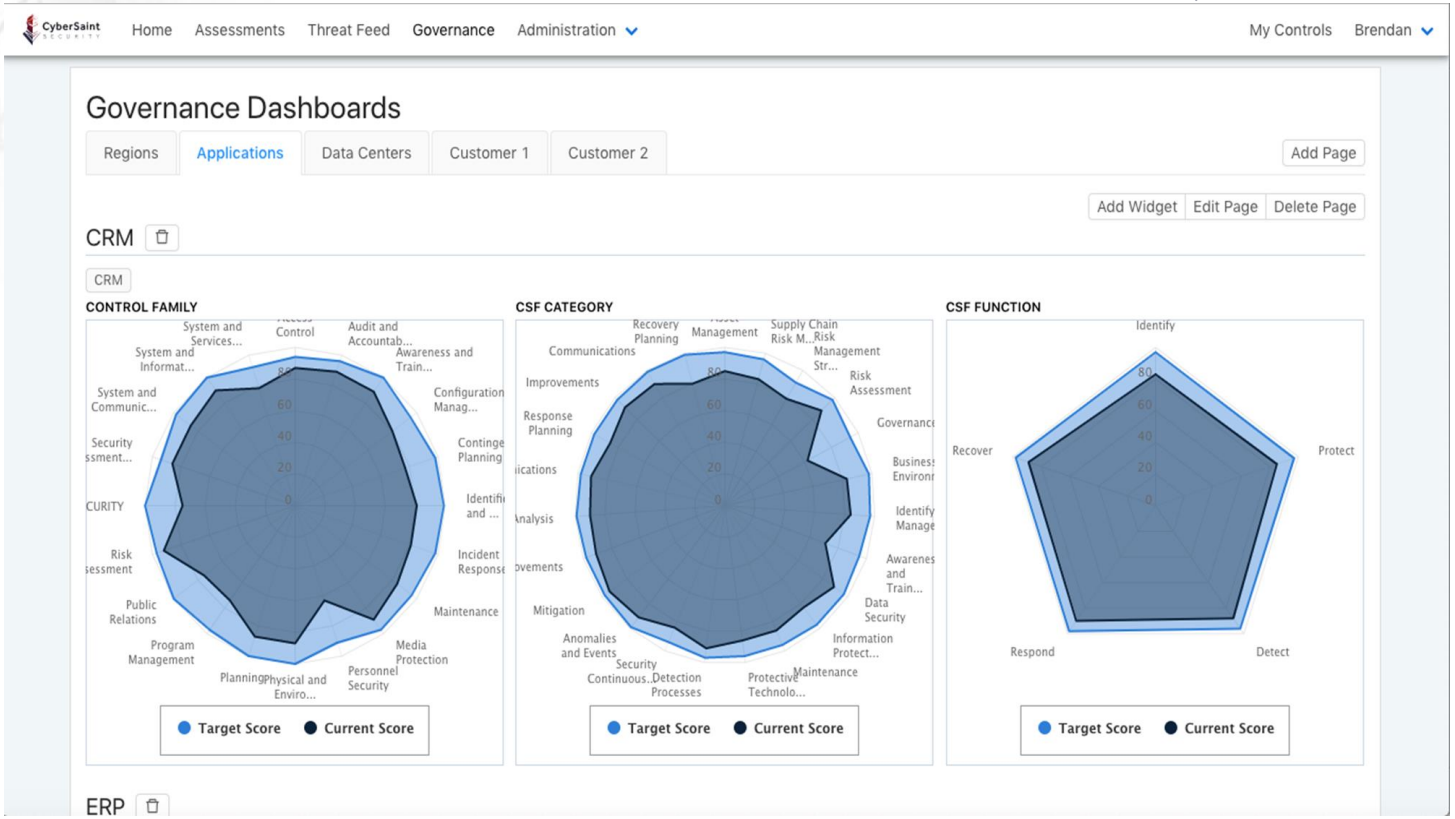
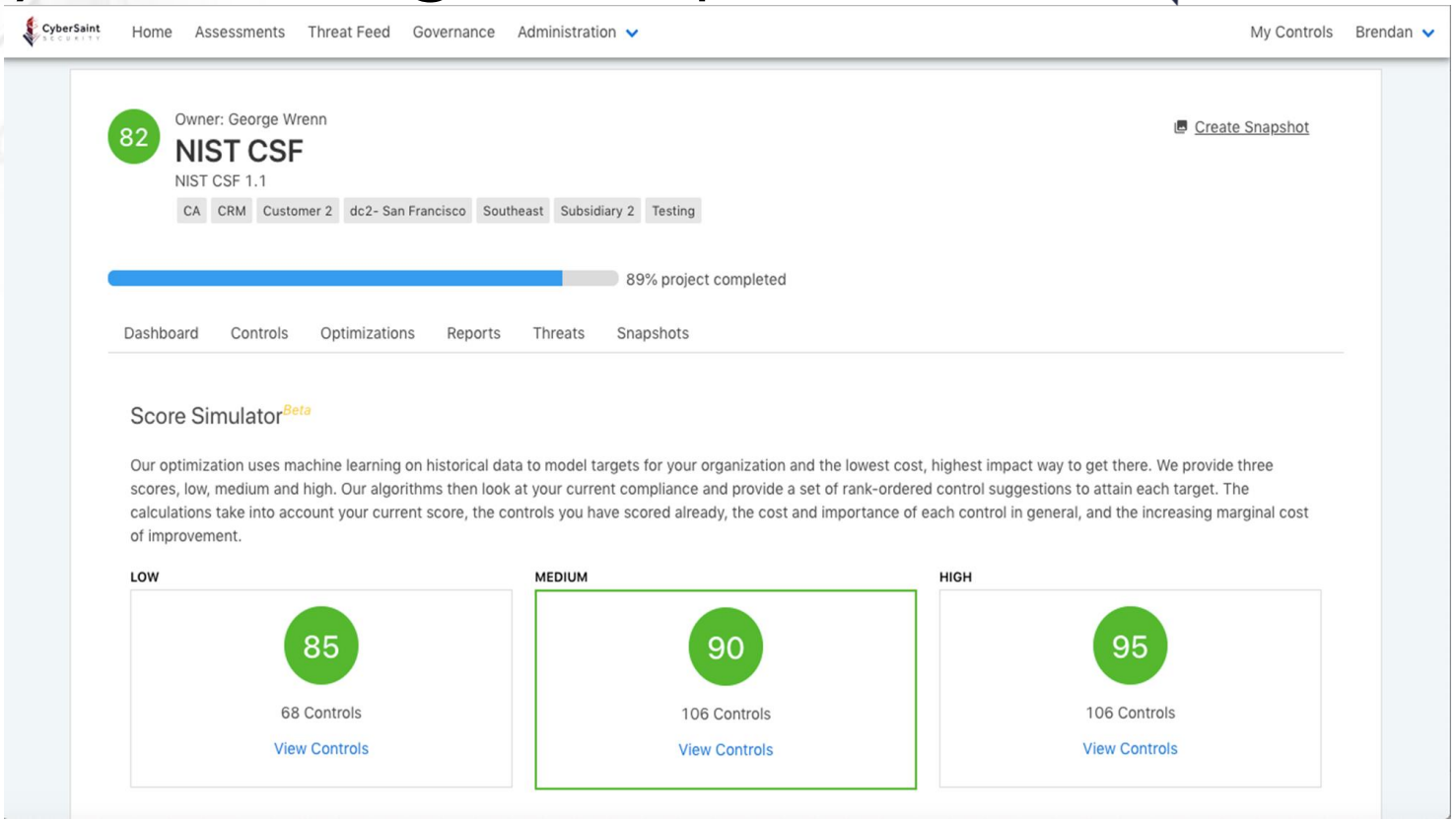
The CyberStrong Dashboard



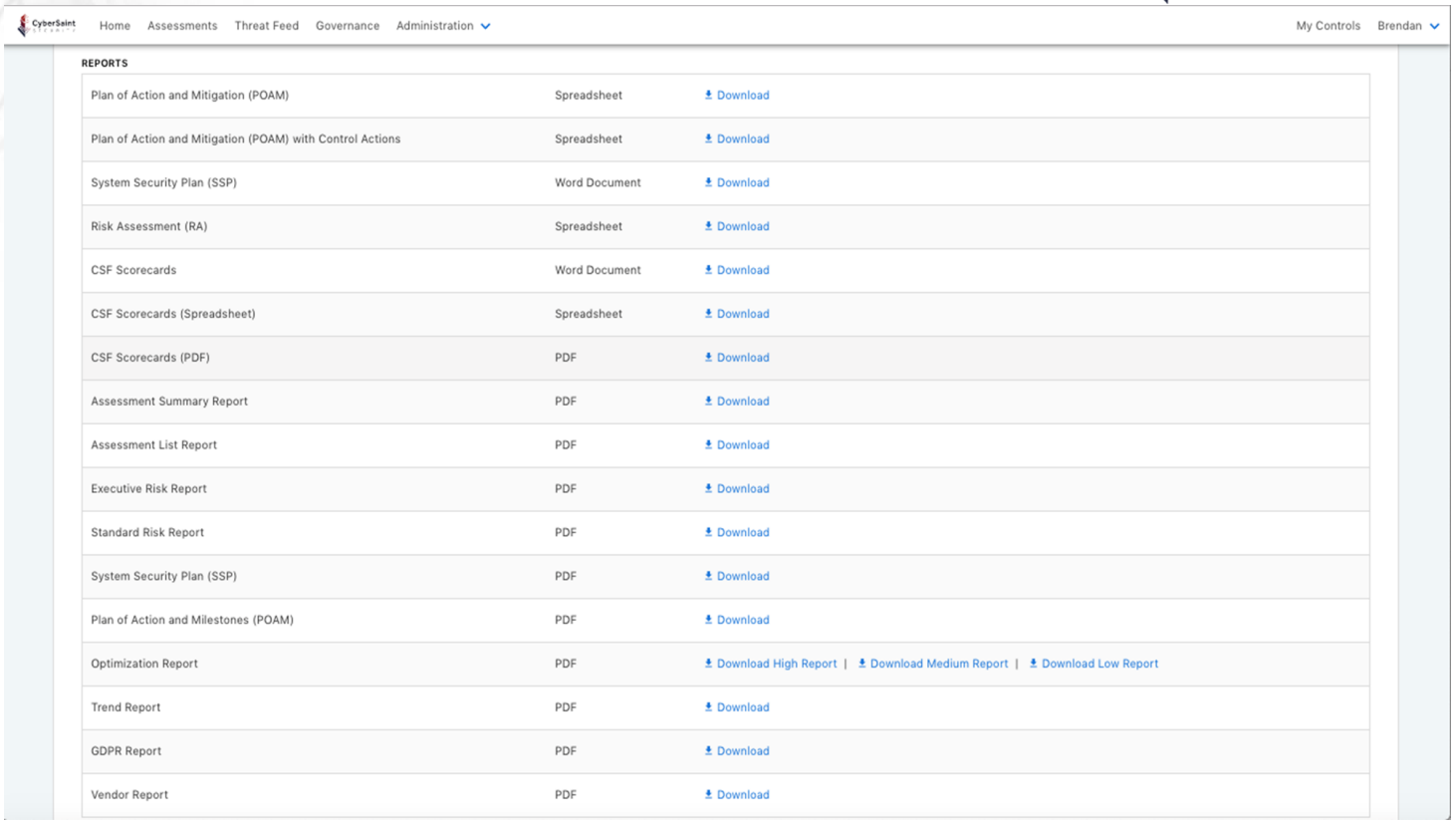
The CyberStrong Governance

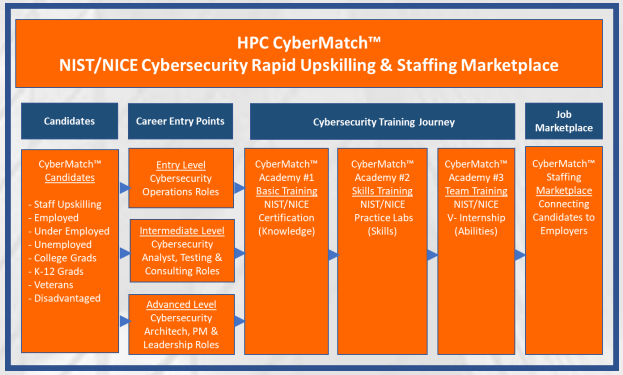


The CyberStrong Compliance



The CyberStrong Reporting





CyberMatch™

NICE Cybersecurity Upskilling & Staffing Program

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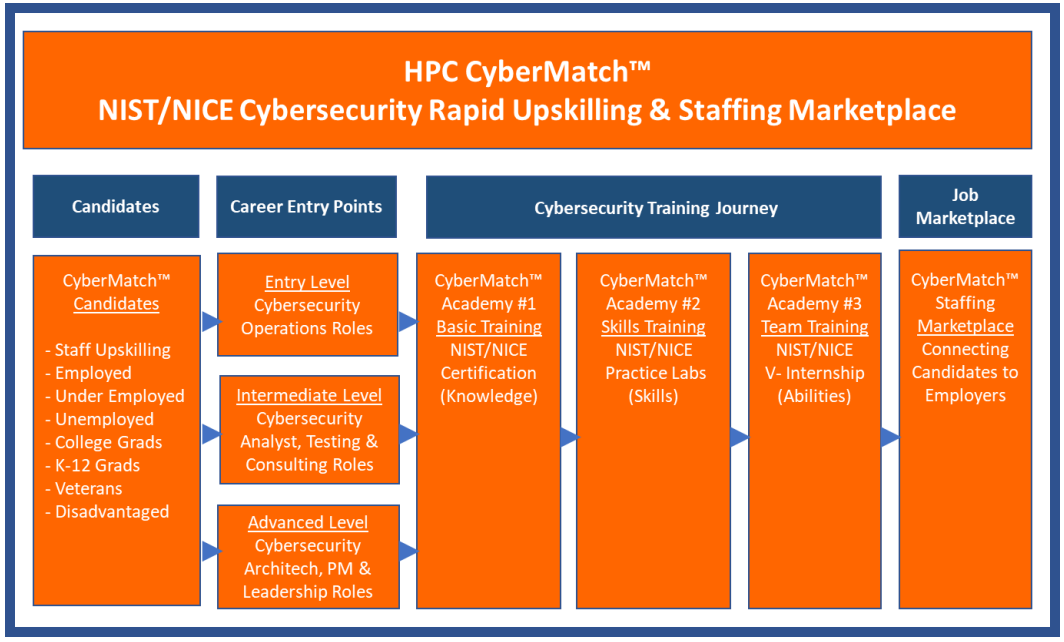
HPC CyberMatch™ Overview

- Rapidly upskills an Enterprise workforce to support a NIST Cybersecurity program
- Recruits and trains new candidates who want to enter the field of Cybersecurity
- Program teaches the Knowledge (certifications), Skills (practice labs) and Abilities (virtual internships) to work in Cybersecurity as detailed in the NICE Cybersecurity Workforce Framework
- Upon graduation new candidates will be listed in the talent marketplace where his or her NIST/NICE skills passport will be available to hiring companies and staffing agencies.



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NIST & NICE Cybersecurity Recap

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NIST and NICE Cybersecurity Summary

- **NIST Cybersecurity Framework**
  Provides guidance on the **risk management controls** (business, technology & management) organizations need to have in place to identify, protect, detect, respond and recover from cyber-attacks.

  - The **NIST-CSF Fast Track™** program teaches the knowledge, skills and abilities
    - How to rapidly automate the NIST-CSF assessment, engineering and monitoring processes
    - Identify the workforce requirements
    - Support and continually improve the program going forward.

- **NICE Cybersecurity Workforce Framework**
  Provides guidance on the **cybersecurity work roles** associated with the adoption of the NIST Cybersecurity Framework.

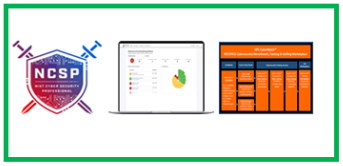
  - The **HPC CyberMatch** program provides enterprises a way to:
    - Rapidly upskill its workforce to support its new NIST Cybersecurity program
    - Recruit new candidates who have been trained in the HPC Cybermatch program

NIST & NICE Cybersecurity Portfolio

Career Pathways

NIST-CSF FastTrack

HPC CyberMatch



NIST Cybersecurity Certification Training

1. NCSP – Foundation, Practitioner & Bootcamp
2. An accredited Certified Training Program
3. Internationally recognized with CPD's

NIST-CSF Rapid Adoption Program

1. NCSP Boot Camp Certification Training
2. CyberStrong Platform Training with 12 Month License
3. Workforce Training Assessment

NIST/NICE Workforce Training & Staffing Program

1. Upskill Existing IT & Cyber Professionals
2. Certify and Upskill New Candidates
3. Staffing Marketplace for Enterprises

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Questions & Answers