



Cyber Training Best Practices

Federal Government Segment

Leader in Competency-Based, Performance-Based, and Role-Based Cyber Security Education Tools and Training

- Cyber Security Training

- AoE™ Flagship
- JCAC – Information Warfare Training Center
- Custom Curriculum – ISACA, CISCO
- Commercial and International Government SOC Training



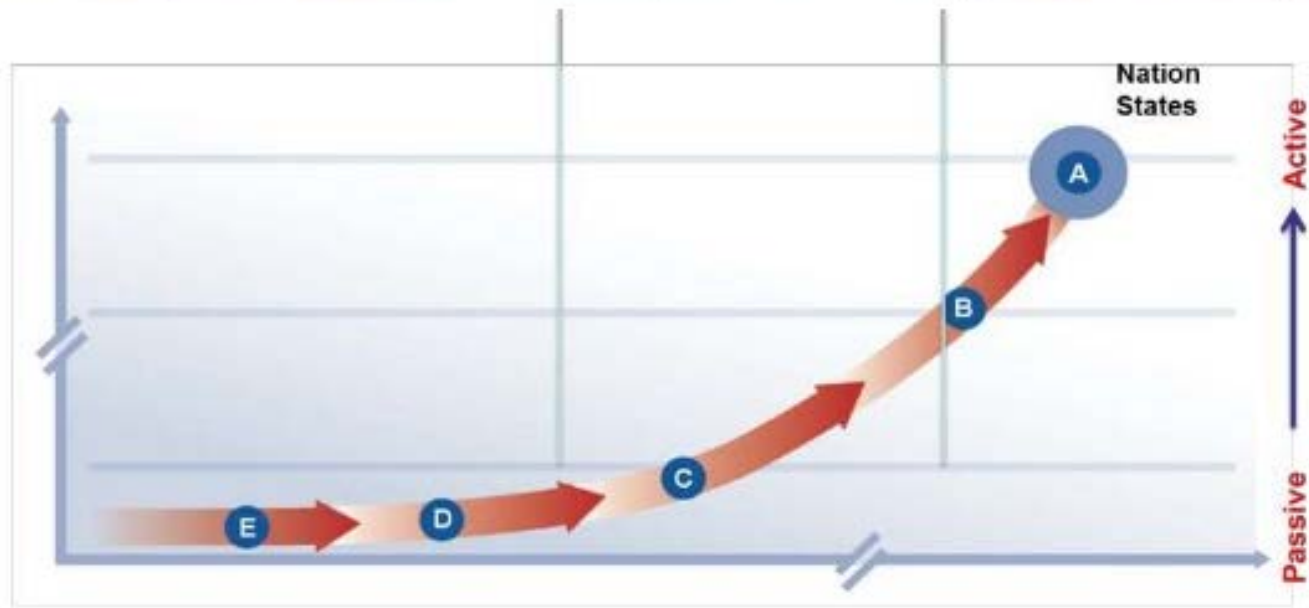
- Assessment Methods

- PerformanScore™
- TalentScore™
- ITADS – Intelligent Tutoring



How to increase cyber maturity

End Goal: Increasing Cyber Maturity



Level of Cyber Capability

Level	Description
E	Reactive & Manual
D	Tools-Based
C	Integrated Picture
B	Dynamic Defense
A	Resilient Enterprise

GOVERNMENTWARE 2015

BUILDING A SECURE SMART NATION

8570 – Certification Based

Table AP3.T2 DoD Approved Baseline Certifications

IAT Level I		IAT Level II		IAT Level III					
A+-CE Network+ CE SSCP CCNA-Security		GSEC Security+ CE SSCP CCNA-Security		CISA GCIH GSE GCED CISSP (or Associate) CASP					
IAM Level I		IAM Level II		IAM Level III					
CAP GISP GSLC Security+ CE		CAP GSLC CISM CASP CISSP (or Associate)		GSLC CISM CISSP (or Associate)					
IASAE I		IASAE II		IASAE III					
CISSP (or Associate) CASP CSSLP		CISSP (or Associate) CASP CSSLP		CISSP - ISSEP CISSP - ISSAP					
CNDSP Analyst		CNDSP Infrastructure Support		CNDSP Incident Responder		CNDSP Auditor		CNDSP Manager	
GCIA CEH GCIH		SSCP CEH		GCIH CSIH CEH GCFA		CISA GSNA CEH		CISSP-ISSMP CISM	

8140 – Performance Based

Security Provision	Information Assurance Compliance	Software Engineering	Enterprise Architecture	Technology Demonstration	Systems Requirements Planning	Test and Evaluation	Systems Development
Operate & Maintain	Data Administration	Info System Security Mgt	Knowledge Mgt	Customer & Tech Support	Network Services	System Administration	Systems Security Analysis
Protect & Defend	Computer Network Defense (CND)	Incident Response	CND Infrastructure Support	Security Program Mgt	Vulnerability Assessment & Mgt		
Analyze	Cyber Threat Analysis	Exploitation Analysis	All-source Analysis	Targets			
Operate & Collect	Collection Operations	Cyber Operational Planning	Cyber Operations				
Oversight & Development	Legal Advice & Advocacy	Strategic Planning & Policy	Education & Training				
Investigate	Investigation	Digital Forensics					

Establishing National Standards



Job

Task/Workrole

Knowledge, Skills, and Abilities (KSA)

and 8140

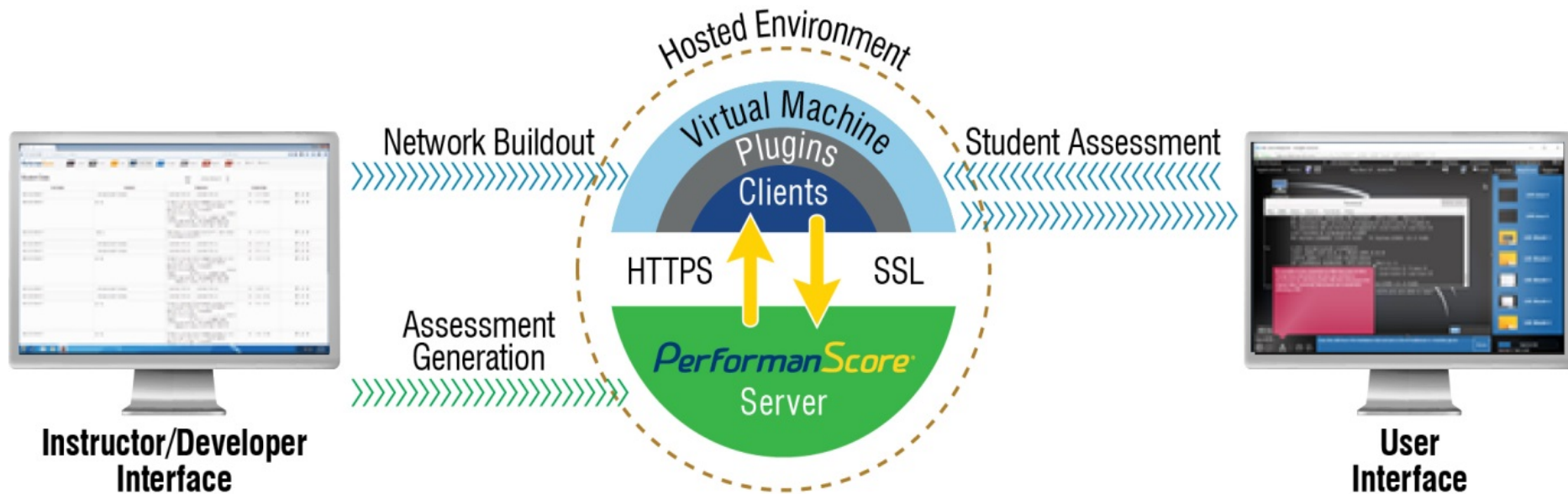
Best Practices in Cyber Training

- Pre Assessment
- Training Plan
- Training
- Tutoring / Mentoring
- Post Assessment (certification)
- Items needed for Successful Training
 - Cyber Range / Labs
 - Training /Curriculum
 - Assessment / Scoring
- Long Term Measurement of Training and Outcomes (Analytics)

Best Practices (Representative examples)

- Nation States
 - Range Environment
 - Heavy hands on - 60/40 ratio Hands on/Training
 - Knowledge is not sufficient
 - Hands on training in realistic simulated environments
 - Assessment (Pre/Post)
- Government Trainer
 - Range Environment
 - Movement to hands on
 - Performance Based Assessment
 - Asynchronous Delivery
- DoD
 - Range Environment
 - Performance based Assessments
 - ASVAB, A school, B school tracking and analytics
- Major Certification Provider
 - Range Environment
 - Commercially Available Performance Based Assessment
 - Mapped to CSF
 - Hands On
 - Government and Industry Customers
 - Asynchronous Delivery

Performance Based Scoring



PerformanScore (PnS) is a tool that scores a user based on their ability to perform specific tasks. As a user works through an activity, plugins and clients monitor, collect, and send completed tasks to a scoring server that assesses their progress against a performance rubric. A task completion score is automatically calculated and reported to authorized agents when the activity is completed.

Contact Us

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