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# Personnel Certification Support System (PCSS 2.0)

**How PCSS is Revolutionizing Information  
Assurance and Security Credentialing**

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PCSS 2.0

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## Personnel Certification Support System (PCSS 2.0 ©):

### How PCSS is Revolutionizing Information Assurance (IA) and Security Credentialing.

On August 15, 2004 the then Deputy Secretary of Defense, Paul Wolfowitz, signed Directive 8570.01. Establishing policies and responsibilities for Department of Defense (DoD) Information Assurance (IA) training, certification, and workforce management. One of the key doctrines of the directive mandated that all IA personnel shall be identified, tracked, and managed so that IA positions are staffed with personnel trained and certified by category, level, and function. Requiring all service members, DoD civilians, and DoD contractors working on government systems to become certified in various technologies based on their work roles (Wolfowitz 1-2). The Assistant Secretary of Defense for Networks and Information Integration/Department of Defense Chief Information Officer (ASD (NII)/DoD CIO), Defense Information Assurance Program (DIAP) set out to:

- Develop and promulgate additional guidance relating to IA training
- certification, and workforce management requirements
- Coordinate the integration of IA initiatives with other workforce development and sustainment requirements.
- Establish metrics to monitor and validate compliance with this Directive as an element of mission readiness. (Wolfowitz 2).

## The Challenge

After writing and publishing DoD 8570.01-M, the challenge for DIAP was how to identify, track, and manage the IA Workforce Improvement program. The Defense Activity for Non-Traditional Education Support (DANTES), have successfully managed the training and certification of service members for several years. DANTES and DIAP worked together to execute the development and monitoring of a DoD-wide Information Assurance Workforce Improvement Program (IA WIP) voucher program. Under DoD 8570.01-M, the IA WIP required an enterprise-wide electronic method for; authorizing approved personnel in IA positions for testing examination preparedness, issuing and scheduling of training and training materials, an electronic method for purchasing, receiving, and issuing examination vouchers to DoD personnel world-wide, and send and receive data from DoD agencies and DoD certification vendors.

After a one (1) year pilot program, the software selected to be the Enterprise-Wide Information Assurance Workforce-Improvement Voucher Program tracking tool is the Personnel Certification Support System (PCSS). The Personnel Certification Support System (PCSS 1.0<sup>®</sup>) was used during the pilot program. The Personnel Certification Support System (PCSS 2.0<sup>®</sup>) is currently in use, as of 1 October 2008.

## How the Challenge Was Met

DIAP and DANTES wrestled with how to get service members and DoD Civilians, world-wide, certified while keeping track of their credentialing status, the DoD's certification resources, and goals met. There are several companies offering software solutions that will

provide online training, online credentialing, examination registration, and other training and certification tasks but none offered a comprehensive approach to electronic credentialing processes and tracking.

### Building the PCSS

In 2004 thru 2006, using our in-house Research and Development (R&D) team and funding, JASZ Tech independently developed the PCSS software and program management process specifically to carry out the regulations and processes established by Directive 8570.01. We saw this as an opportunity to offer commercial and government agencies a comprehensive solution to meet their 8570.1 certification goals initially, and to keep personnel certified over the years.

In 2004 JASZ Technology had a yet un-named application in that already performed many of the functions required to implement Directive 8570.01-M. This application was put into production under the DAN TES Microsoft Exam Voucher Pilot program in November 2004. The DAN TES Certification Program, under the management of Sandra Winborne, PhD, has been at the forefront of electronic training and certification for several years. Our initial application served as the framework for PCSS 1.0<sup>©</sup>, which was ready for production after nearly two years of R&D.

The Personnel Certification Support System (PCSS 2.0<sup>©</sup>), or DoD-PCSS; signifying the DoD's license of PCSS 2.0<sup>©</sup>, as it is most commonly called, is currently housed or hosted from a DoD Data Center. The Personnel Certification Support System (PCSS 2.0 <sup>©</sup>) is a Commercial Off The

Shelf (COTS), web-enabled application that allows an organization to put its training, testing, certification, licensing, and applicant tracking processes online for 24x7x365 access and operations. PCSS is an n-tier web application developed in the .NET framework, with an Asynchronous Java Script and XML (AJAX)-enabled front-end. It employs a SQL Server 2005 database that can be run in a clustered database environment. PCSS 2.0<sup>®</sup> is a Certified & Accredited, Common Access Card (CAC) enabled, Section 508, FISMA, and DIACAP compliant online tool that:

- Tracks applicants
- Training and exam vouchers
- Training and testing materials

PCSS 2.0<sup>®</sup> integrates with legacy databases, which can pull or push personnel manning table, position control, and other data elements into the PCSS to populate the end-user community. Each organization, department, work-group, etc., can have its separate business rules for training and certification input into the PCSS, turn it on, and the power house workflow engine does the rest. The business rules and requirements contained in Directive 8570.1-m, and those established at the command level, do not have to be remembered by managers and IA personnel because the PCSS software enforces the business rules and gives on-screen prompts to move DoD-IA personnel through the certification process. Business rules can be changed in real-time from the organization's Administrator's page. Special programming skills are not required. It is all handled through on-screen prompts.

With a customizable:

- Web interface
- Workflow engine
- Approval process
- Knowledgebase
- Reports
- And more...

Managers can administer any type of training, certification, and credentialing program any time, all from a convenient dashboard. Managers can:

- Approve requests for training, certification, and credentialing
- Track the credentialing status of personnel by individual, department, or organization
- Track training and exam voucher usage, expiration, and more...
- Track monetary resources spent on credentialing programs
- Use robust, real-time reporting tools to plan for current and future credentialing programs
- Transfer training and certification resources and personnel from group to group
- View real-time, standard, and ad hoc reports that they can customize on the fly
- View IA personnel certification and credentialing history

PCSS 2.0<sup>®</sup> is a robust software solution that is accessible over the Internet/Intranet.

Personnel have 24x7x365, world-wide access to training, certification, and credentialing programs. PCSS 2.0<sup>®</sup> fit seamlessly into the DoD's network architecture. It can run on any

existing Microsoft Windows environment. Multiple organizations can use the same instance of PCSS 2.0<sup>®</sup> while maintaining separate training, certification, and exam voucher management workflows. Allowing for the advantage of economies of scale without losing organizational, departmental, or group program management flexibility. Training, certification, and credentialing resources can be separated at a high-level or a granular level, depending on the needs. Access to data, tasks, administrative pages, and reports are based on end-user roles which can be defined by business rules. Multiple departments, organizations, and groups can have different business rules. PCSS 2.0's<sup>®</sup> web interface can be customized for the organization. Personnel can manage their individual training, certification, and credentialing from their own dashboard. PCSS employs "strong" password practices and role based access.

### Conclusion

The Department of Defense – Defense Information Assurance Program (DIAP) released the Directive 8570.1-m implementation manual. DANTES and DIAP collaborated on a joint pilot program to implement an electronic exam voucher program, to procure and manage the Information Assurance Workforce Improvement Voucher Management Program. (IA WIP). PCSS 1.0<sup>®</sup> was implemented to procure and manage the Information Assurance Workforce Improvement Electronic Voucher Management Program (IA WIP).

In an article written for CrossTalk – The Journal of Defense Software Engineering, July 2008, George Beiber – Director IA-WIP wrote. "...The CIO DIAP put the enterprise-wide concept into practice by developing and conducting a certification voucher program on behalf of the DoD components (known as the Voucher Pilot Program). Personnel certification requirements

were gathered from the components and coordinated with commercial certification providers in the form of bulk voucher purchases. The Personnel Certification Support System (PCSS), an online voucher management system, maintained all voucher allocation and distribution information for each component. The PCSS will continue to be used for the second year of implementation as an effective tool to manage certification vouchers....”(Bieber 26-27).

The Personnel Certification Support System played a role in helping the DoD to achieve some significant IA WIP milestones in 2007 (Beiber 26). The PCSS has performed to the standard we at JASZ Technology intended, which was to become the comprehensive Information Assurance Workforce Improvement Voucher implementation solution. The DoD is certifying its workforce world-wide through the use of technology, the PCSS 2.0.

## Works Cited

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