

NASA

Case Study

NASA validates IT security readiness with objective skills metrics

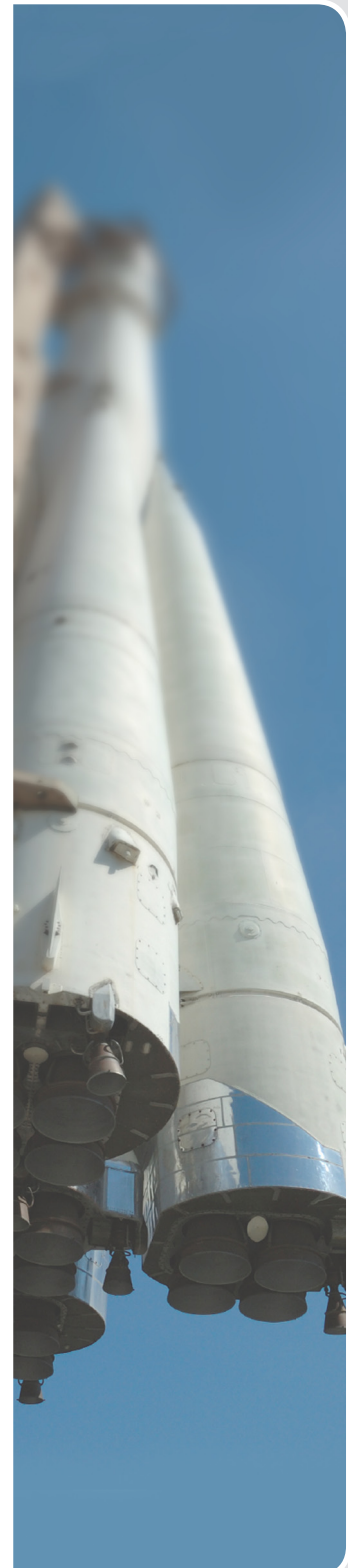
Challenges:

In NASA's sensitive information environment, IT security plays a large role in the daily operations of its more than 3,000 systems administrators. Consequently, it is essential for NASA to measure and validate these professionals' IT security skills. After reviewing IT assessments from a variety of training vendors, NASA found most were designed to sell training products rather than provide an objective certification of current skills. Robert Solomon, a project leader in NASA's IT Security Awareness and Training Center, decided to look into an online skills measurement solution created specifically for pre-employment assessment and skills certification.

Solution:

NASA turned to PreVisor® for help. Working together, they tailored an assessment program to specifically address NASA's unique needs by developing customized tests to certify that employees possessed the critical IT security skills required for the position. Additionally, the assessments can measure degree of knowledge as they use Computer Adaptive Testing (CAT) technology which dynamically adjusts the difficulty of the questions to the test taker's ability level. As a result, Solomon explains, "the tests adapt to the boundaries of the test taker's knowledge - a key feature for any organization that wants an accurate, unbiased snapshot of critical employee skills." Also, because each test is different, it reduces the risk of cheating.

Another feature of PreVisor's skills assessments is the flexible structure that enables individuals to assess their skills using a series of certifications. The first component of that structure is the required Primary Certification, covering Internet security and basic systems environments. The Secondary Certification presents "elective" tests, covering other specified operating systems. For test takers, this structure allows for certification of essential IT security skills while providing the opportunity to validate skills for career development. For managers, the test results provide a detailed picture of available skills across the agency.



Results:

Today PreVisor's assessments are a critical component of NASA's selection process for systems administrators. In fact, to be accepted for the position, all candidates/employees must pass the assessment with a predetermined minimum score. The assessments also provide an objective skills measurement platform, a consistent reporting system with immediate results and assessments validated through an ISO 9001-2000 certified development process. In addition, Internet accessibility accommodates the time and resource constraints of test takers and program managers, as well as provides consistency in IT security. According to Solomon, "four people are currently running a program that accommodates more than 3,000."

Like many agencies, NASA approached its skills measurement strategy looking for a way to show that its people had the capabilities to perform and succeed in their job functions. Today NASA's skills measurement system is delivering results not only by providing objective metrics to validate critical skills but also by serving as a catalyst for continuous improvement among employees and contractors who are crucial to the agency's success.

CHALLENGES:

- Highly-sensitive information systems
- Need to measure and certify IT security skills
- 3,000 IT Security Administrator positions
- Various locations across the U.S.
- Time and resource constraints

RESULTS:

- Objective skills measurement
- Consistent certification across locations
- Minimum required administration resources
- Dynamic testing certifies degree of knowledge
- CAT reduces risk of cheating
- Detailed picture of skills across the agency