



STATE OF NORTH CAROLINA

INFORMATION SECURITY VULNERABILITY ASSESSMENT

NORTH CAROLINA DEPARTMENT OF REVENUE

RALEIGH, NORTH CAROLINA

NOVEMBER 2006

OFFICE OF THE STATE AUDITOR

LESLIE W. MERRITT, JR., CPA, CFP

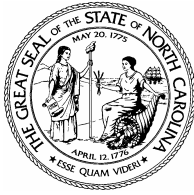
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Leslie W. Merritt, Jr., CPA, CFP
State Auditor

2 S. Salisbury Street
20601 Mail Service Center
Raleigh, NC 27699-0601
Telephone: (919) 807-7500
Fax: (919) 807-7647
Internet
<http://www.ncauditor.net>

AUDITOR'S TRANSMITTAL

The Honorable Michael F. Easley, Governor
Members of the North Carolina General Assembly
Mr. Norris Tolson, Secretary
Mr. George Bakolia, State CIO

Ladies and Gentlemen:

At the request of the North Carolina Department of Revenue, the Office of the State Auditor, in consultation and coordination with Information Technology Services, undertook a project to evaluate the network and computer security in place over computer operations at the North Carolina Department of Revenue.

In May and June 2006, the Office of the State Auditor used a private contractor to perform a comprehensive vulnerability assessment of the network and computer security at the North Carolina Department of Revenue. This assessment was conducted under the authority granted by North Carolina G.S. 147-64.6(c)(18).

This report represents the general results of our assessment. A detailed report containing the conditions found and recommended corrective action was provided to the North Carolina Department of Revenue at the conclusion of our fieldwork.

The primary objective of this assessment was to evaluate the security controls over the information network at the Agency. The scope of our assessment included security policies, network architecture, network vulnerability, host vulnerability, application design, application penetration, and secure build review.

We wish to express our sincere appreciation to the staff of the North Carolina Department of Revenue for the exceptional courtesy, cooperation, and assistance provided to us during this audit.

North Carolina General Statutes require the State Auditor to make audit reports available to the public. Copies of audit reports issued by the Office of the State Auditor may be obtained through one of the options listed in the back of this report.

Respectfully submitted,

Leslie W. Merritt, Jr., CPA, CFP
State Auditor

OBJECTIVES AND SCOPE

At the request of the North Carolina Department of Revenue, the Office of the State Auditor, in consultation and coordination with Information Technology Services, undertook a project to evaluate the network and computer security in place over computer operations within the North Carolina Department of Revenue.

In May and June 2006, the Office of the State Auditor used a private contractor to perform a comprehensive information security assessment of the North Carolina Department of Revenue. The goal of the security assessment was to assist the North Carolina Department of Revenue with achieving and maintaining a “best practices” level of information security in order to protect agency internal systems, data, and assets.

The comprehensive information security assessment focused on seven key areas:

- **Security Policy Review.** The Security Policy Review evaluates the existing and proposed security policies and procedures and provides guidelines for future development.
- **Network Architecture Assessment.** The Network Architecture Assessment is a detailed review of a network design from an information security perspective.
- **Network Vulnerability Assessment.** The Network Vulnerability Assessment provides a thorough understanding of security-related weaknesses and exposures in networks.
- **Host Vulnerability Assessment.** A Host Vulnerability Assessment reviews the current security configuration of deployed hosts.
- **Application Design Assessment.** The Application Design Assessment is a detailed review of an application design from an information security perspective.
- **Application Penetration Assessment.** The Application Penetration Assessment provides a thorough understanding of security-related weaknesses and exposures in an application.
- **Secure Build Review.** A Secure Build Review is a security analysis in a non-production environment of the build procedure for a host.

Our assessment identified security controls within each area above that were well defined and effective as well as controls that posed security risks and exposed the agency to possible internal or external attack. Control weaknesses were classified in relation to the level of risk as High, Medium, or Low. Our assessment identified twenty-five high level weaknesses, twenty-four medium level weaknesses, and twenty-two low level weaknesses.

Due to the sensitive nature of the conditions found in these weaknesses, we have conveyed these findings to management in a separate report pursuant to the provision of the North Carolina General Statute 147-64.6(c)(18).

OBJECTIVES AND SCOPE (CONCLUDED)

Auditee's Response:

The Department of Revenue would like to extend our appreciation to the Office of the State Auditor for its assistance with the security vulnerability assessment performed by the Office of State Auditor's private contractor recently. We are pleased to report that several corrective actions have already been taken to ensure compliance with the recommendations. Many of these recommendations were acted upon prior to the completion of the assessment. Other recommendations, some of which will require considerable effort and training on the part of our staff, as well as funding to purchase additional security-related infrastructure services, are also being considered. These recommendations will be prioritized and implemented based upon resource availability.

The private contractor did an excellent job of working with the staff at DOR in a cooperative and effective manner, while thoroughly assessing our operating environment. They demonstrated a comprehensive knowledge of the subject matter and communicated effectively at all levels of the organization.

Thank you for the efforts of the resources from the Office of the State Auditor in this very successful endeavor.

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20601 Mail Service Center
Raleigh, North Carolina 27699-0601

Telephone: 919/807-7500

Facsimile: 919/807-7647