Buncombe County, North Carolina

PCI Compliance Policy

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1.0 Policy Information

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Approvals:	Approved By:	IT/Finance Director	Approved By:	Board of Commissioners
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Revision History

Effective Date	Version	Section	Summary of Changes	Author
11/12/2017		11	Added 11.3.4	

2.0 Introduction

This document explains Buncombe County's credit card security requirements as required by the Payment Card Industry Data Security Standard (PCI DSS) Program. Buncombe County management is committed to these security policies to protect information utilized by Buncombe County in attaining its business goals. All employees are required to adhere to the policies described within this document.

3.0 Scope of Compliance

The PCI requirements apply to all systems that store, process, or transmit cardholder data. Currently, Buncombe County's cardholder environment consists only of limited payment applications (typically point-of-sale systems) connected to the internet, but does not include storage of cardholder data on any computer system.

Due to the limited nature of the in-scope environment, this document is intended to meet the PCI requirements as defined in Self-Assessment Questionnaire (SAQ) B-IP, ver. 3.0, released February, 2014. Should Buncombe County implement additional acceptance channels, add additional non-dedicated payment terminal systems, begin storing cardholder data in electronic format, or otherwise become ineligible to validate compliance under SAQ B-IP, it will be the responsibility of Buncombe County to determine the appropriate compliance criteria and implement additional policies and controls as needed. Based on the self-assessment questionnaire Buncombe County must maintain compliance with the following list of PCI requirements:

Requirement 1: Build and Maintain a Secure Network

Network Description
Buncombe County will maintain a current network diagram that identifies all connections between the cardholder data environment and other networks, including any wireless networks. The network diagram will be kept updated by the network administrator (or other responsible personnel) to reflect changes in the network, with a date indicating when the most recent update was made. (PCI Requirement 1.1.2)

The network will be configured with a requirement for a firewall at each Internet connection and between any internet-facing demilitarized zone (DMZ) and the internal network zone that contains the payment terminal or terminals. (PCI Requirement 1.1.4)

The network administrator shall maintain documentation which details use of all services, protocols, and ports allowed into the internal, secure network zone. This list will include business justification for any traffic allowed in or out of the network. It will also include documentation of security features implemented for those protocols considered to be insecure. Examples of insecure services, protocols, or ports include but are not limited to FTP, Telnet, POP3, IMAP, and SNMP v1 and v2. (PCI Requirement 1.1.6)

Firewall Configuration
Firewalls must restrict connections between untrusted networks and any system in the cardholder data environment. An "untrusted network" is any network that is external to the networks belonging to the entity under review, and/or which is out of the entity's ability to control or manage. Access to the internet must be through a firewall, as must any direct connection to a vendor, processor, or service provider. (PCI Requirement 1.2)

Inbound and outbound traffic must be restricted by the firewalls to that which is necessary for the cardholder data environment. All other inbound and outbound traffic must be specifically denied. (PCI Requirement 1.2.1)
Perimeter firewalls must be installed between any wireless networks and the cardholder data environment. These firewalls must be configured to deny or control (if such traffic is necessary for business purposes) any traffic from the wireless environment into the cardholder data environment. (PCI Requirement 1.2.3)

Firewall configuration must prohibit direct public access between the Internet and any system component in the cardholder data environment as follows:

- Direct connections are prohibited for inbound and outbound traffic between the Internet and the cardholder data environment. (PCI Requirement 1.3.3)

- Buncombe County will install controls that implement anti-spoofing measures to detect and block forged source IP addresses from entering the network. (For example, block traffic originating from the Internet with an internal source address.) (PCI Requirement 1.3.4)

- Outbound traffic from the cardholder data environment to the Internet must be explicitly authorized by management and controlled by the firewall. (PCI Requirement 1.3.5)

- Firewalls used to protect the cardholder data environment must implement stateful inspection, also known as dynamic packet filtering. (PCI Requirement 1.3.6)

  Any mobile and/or employee-owned computers with direct connectivity to the Internet (for example, laptops used by employees), which also have the ability to access the organization's cardholder data environment must have a local (personal) software firewall installed and active. This firewall must be configured to specific standards, and not alterable by mobile and/or employee-owned computer users. (PCI Requirement 1.4)

Requirement 2: Do not use Vendor-Supplied Defaults for System Passwords and Other Security Parameters

Vendor Defaults
Vendor-supplied defaults must always be changed before installing a system on the network. Examples of vendor-defaults include passwords, SNMP community strings, and elimination of unnecessary accounts. (PCI Requirement 2.1)

Default settings for wireless systems must be changed before implementation. Wireless environment defaults include, but are not limited to: (PCI Requirement 2.1.1)

- Default encryption keys

- Passwords

- SNMP community strings

- Default passwords/passphrases on access points

- Other security-related wireless vendor defaults as applicable

Firmware on wireless devices must be updated to support strong encryption (such as WPA or WPA2) for authentication and transmission of data over wireless networks.

Non-Console Administrative Access
Credentials for non-console administrative access must be encrypted using technologies such as SSH, VPN, or TLS. Encryption technologies must include the following: (PCI Requirement 2.3)

- Must use strong cryptography, and the encryption method must be invoked before the administrator's password is requested.

- System services and parameter files must be configured to prevent the use of telnet and other insecure remote login commands.

- Must include administrator access to web-based management interfaces.

- Use vendor documentation and knowledge of personnel to verify that strong cryptography is in use for all non-console access and that for the technology in use it is implemented according to industry best practices and vendor recommendations.

Requirement 3: Protect Stored Cardholder Data

Prohibited Data
Processes must be in place to securely delete sensitive authentication data (defined below) post-authorization so that the data is unrecoverable. (PCI Requirement 3.2)

Payment systems must not store sensitive authentication data in any form after authorization (even if encrypted). Sensitive authentication data is defined as the following:

- The full contents of any track data from the magnetic stripe (located on the back of a card, equivalent data contained on a chip, or elsewhere) are not stored under any circumstance. (PCI Requirement 3.2.1)

- The card verification code or value (three-digit or four-digit number printed on the front or back of a payment card) is not stored under any circumstance. (PCI Requirement 3.2.2)

- The personal identification number (PIN) or the encrypted PIN block are not stored under any circumstance. (PCI Requirement 3.2.3)

Displaying PAN
Buncombe County will mask the display of PANs (primary account numbers), and limit viewing of PANs to only those employees and other parties with a legitimate need. A properly masked number will show at most only the first six and the last four digits of the PAN. This requirement does not supersede stricter requirements in place for displays of cardholder data—for example, legal or payment card brand requirements for point-of-sale (POS) receipts. Policies and procedures for masking the display of PANs must mandate the following: (PCI requirement 3.3)

- A list of roles that need access to displays of full PAN is documented, together with a legitimate business need for each role to have such access.

- PAN must be masked when displayed such that only personnel with a legitimate business need can see the full PAN.

- All other roles not specifically authorized to see the full PAN must only see masked PANs.

Requirement 4: Encrypt Transmission of Cardholder Data Across Open, Public Networks

Transmission of Cardholder Data
In order to safeguard sensitive cardholder data during transmission over open, public networks, Buncombe County will use strong cryptography and security protocols (for example, TLS, IPSEC, SSH, etc.). These controls will be implemented as follows: (PCI Requirement 4.1)

- Only trusted keys and certificates are accepted.

- The protocol in use only supports secure versions or configurations.

- The encryption strength is appropriate for the encryption methodology in use.

Industry best practices (for example, IEEE 802.11i) must be used to implement strong encryption for authentication and transmission for wireless networks transmitting cardholder data or connected to the cardholder data environment. Weak encryption (for example, WEP, SSL) is not to be used as a security control for authentication or transmission. (PCI Requirement 4.1.1)

Sending unencrypted PANs by end-user messaging technologies is prohibited. Examples of end-user technologies include email, instant messaging and chat. (PCI requirement 4.2)

Requirement 6: Develop and Maintain Secure Systems and Applications

Risk and Vulnerability
Buncombe County will establish a process to identify security vulnerabilities, using reputable outside sources for security vulnerability information, and assign a risk ranking (for example, as “high,” “medium,” or “low”) to newly discovered security vulnerabilities.

Risk rankings are to be based on industry best practices as well as consideration of potential impact. For example, criteria for ranking vulnerabilities may include consideration of the CVSS base score, and/or the classification by the vendor, and/or type of systems affected. Methods for evaluating vulnerabilities and assigning risk ratings will vary based on an organization’s environment and risk-assessment strategy. Risk rankings should, at a minimum, identify all vulnerabilities considered to be a “high risk” to the environment. In addition to the risk ranking, vulnerabilities may be considered “critical” if they pose an imminent threat to the environment, impact critical systems, and/or would result in a potential compromise if not addressed. Examples of critical systems may include security systems, public-facing devices and systems, databases, and other systems that store, process, or transmit cardholder data. (PCI Requirement 6.1)

All critical security patches must be installed with one month of release. This includes relevant patches for operating systems and all installed applications. All applicable non-critical vendor-supplied security patches are installed within an

appropriate time frame (for example, within three months). (PCI Requirement 6.2)

Requirement 8: Restrict Access to Cardholder Data by Business Need to Know

Remote Access
Two-factor authentication must be incorporated for remote access (network-level access originating from outside the network) to the network by employees, administrators, and third parties. (PCI Requirement 8.3)

Vendor Accounts
All accounts used by vendors for remote maintenance shall be enabled only during the time period needed. Vendor remote access accounts must be monitored when in use. (PCI Requirement 8.1.5)

User Accounts
For in-scope user accounts (those associated with the payment process) do not use group, shared, or generic IDs, passwords, or other authentication methods as follows: (PCI Requirement 8.5)

- Generic user IDs are disabled or removed.
- Shared user IDs do not exist for system administration and other critical functions.

Shared and generic user IDs are not used to administer any system components.

Requirement 9: Restrict Physical Access to Cardholder Data

Physically Secure All Areas and Media Containing Cardholder Data
All publicly accessible network jacks must have physical and/or logical controls to restrict access to the secure network by unauthorized personnel. (PCI requirement 9.1.2)

Hard copy materials containing confidential or sensitive information (e.g., paper receipts, paper reports, faxes, etc.) are subject to the following storage guidelines:

- All media must be physically secured. (PCI requirement 9.5)
- Strict control must be maintained over the internal or external distribution of any kind of media containing cardholder data. These controls shall include: (PCI Requirement 9.6)
    - Media must be classified so the sensitivity of the data can be determined. (PCI Requirement 9.6.1)
    - Media must be sent by a secure carrier or other delivery method that can be accurately tracked. (PCI Requirement 9.6.2)
    - Management approval must be obtained prior to moving the media from the secured area. (PCI Requirement 9.6.3)
- Strict control must be maintained over the storage and accessibility of media containing cardholder data. (PCI Requirement 9.7)

Destruction of Data
All media containing cardholder data must be destroyed when no longer needed for business or legal reasons. (PCI requirement 9.8)

Hardcopy media must be destroyed by shredding, incineration or pulping so that cardholder data cannot be reconstructed. (PCI requirement 9.8.1.a)

Containers storing information waiting to be destroyed must be secured (locked) to prevent access to the contents by unauthorized personnel. (PCI requirement 9.8.1.b)

Protection of Payment Devices
Devices that capture payment card data via direct physical interaction with the card (such as swipe readers and any other payment terminals) must be protected. This protection must include preventing the devices from being tampered with or

substituted. (PCI requirement 9.9)
Buncombe County must maintain an up-to-date list of devices. Employees shall be instructed to maintain the integrity and currency of the inventory. The list should include the following: (PCI requirement 9.9.1)

- Make and model of all devices.
- Location of each device (for example, the address of the site or facility where the device is located).
- Device serial number or other method of unique identification.

The payment devices must be periodically inspected. Check surfaces to detect tampering (for example, addition of card skimmers to devices). Checks must also be made that will detect substitution (for example, by checking the serial number or other device characteristics to verify it has not been swapped with a fraudulent device). (PCI requirement 9.9.2)

Employees and contractors who interact with the payment devices must be provided with training that enables them to be aware of attempted tampering or replacement of devices. Training should include the following: (PCI requirement 9.9.3)

- Employees must verify the identity of any third-party persons claiming to be repair or maintenance personnel prior to granting them access to modify or troubleshoot devices.
- Employees must be instructed not to install, replace, or return devices without verification from management. The inventory list (required previously) must be updated by the employee when device locations are changed or new devices are added.
- Employees need to be aware of suspicious behavior around devices (for example, attempts by unknown or unauthorized persons to unplug or open devices).

Requirement 11: Regularly Test Security Systems and Processes

Vulnerability Scanning

At least quarterly, and after any significant changes in the network (such as new system component installations, changes in network topology, firewall rule modifications, product upgrades), Buncombe County will perform vulnerability scanning on all in-scope systems. (PCI Requirement 11.2)

Quarterly external vulnerability scan results must satisfy the ASV Program guide requirements (for example, no vulnerabilities rated higher than a 4.0 by the CVSS and no automatic failures). External vulnerability scans must be performed by an Approved Scanning Vendor (ASV), approved by the Payment Card Industry Security Standards Council (PCI SSC). Scan reports must be retained for a minimum of a year. (PCI Requirement 11.2.2)

Buncombe County uses segmentation to isolate the CDE from other networks, thus penetration testing procedures have been defined to test all segmentation methods and confirm they are operational and effective, and isolate all out-of-scope systems from systems in the CDE. Penetration testing is performed at least annually and after any changes to segmentation control/methods and includes full coverage of all segmentation controls/methods in use, verifies segmentation methods are operation and effective, and isolates all out-of-scope systems from systems in the CDE. All tests are performed by a qualified internal resource. (PCI Requirement 11.3.4)

Requirement 12: Maintain a Policy that Addresses Information Security for Employees and Contractors

Security Policy

Buncombe County shall establish, publish, maintain, and disseminate a security policy that addresses how the company will protect cardholder data. (PCI Requirement 12.1)
This policy must be reviewed at least annually, and must be updated as needed to reflect changes to business objectives or the risk environment. (PCI requirement 12.1.1)

Critical Technologies

Buncombe County shall establish usage policies for critical technologies (for example, remote-access technologies, wireless technologies, removable electronic media, laptops, tablets, personal data/digital assistants (PDAs), email, and internet usage. (PCI requirement 12.3)

These policies must include the following:

- Explicit approval by authorized parties to use the technologies. (PCI Requirement 12.3.1)
- A list of all such devices and personnel with access. (PCI Requirement 12.3.3)
- Acceptable uses of the technologies. (PCI Requirement 12.3.5)

Activation of remote-access technologies for vendors and business partners only when needed by vendors and business partners, with immediate deactivation after use. (PCI Requirement 12.3.9)

Security Responsibilities
Buncombe County's policies and procedures must clearly define information security responsibilities for all personnel. (PCI Requirement 12.4)

Incident Response Policy
The county shall establish, document, and distribute security incident response and escalation procedures to ensure timely and effective handling of all situations. (PCI requirement 12.5.3)

Incident Identification
Employees must be aware of their responsibilities in detecting security incidents to facilitate the incident response plan and procedures. All employees have the responsibility to assist in the incident response procedures within their particular areas of responsibility. Some examples of security incidents that an employee might recognize in their day to day activities include, but are not limited to,

- Theft, damage, or unauthorized access (e.g., papers missing from their desk, broken locks, missing log files, alert from a security guard, video evidence of a break-in or unscheduled/unauthorized physical entry).
- Fraud – Inaccurate information within databases, logs, files or paper records.

Reporting an Incident
The Finance Department should be notified immediately of any suspected or real security incidents involving cardholder data:

- Contact the Finance Department to report any suspected or actual incidents.
- No one should communicate with anyone outside of their supervisor(s) or the Finance Department about any details or generalities surrounding any suspected or actual incident. All communications with law enforcement or the public will be coordinated by the Finance Department.

Document any information you know while waiting for the Finance Department to respond to the incident. If known, this must include date, time, and the nature of the incident. Any information you can provide will aid in responding in an appropriate manner.

Incident Response Policy (PCI requirement 12.10.1)
Responses can include or proceed through the following stages: identification, severity classification, containment, eradication, recovery and root cause analysis resulting in improvement of security controls.
Contain, Eradicate, Recover and perform Root Cause Analysis

1. Notify applicable card associations.

Visa

Provide the compromised Visa accounts to Visa Fraud Control Group within ten (10) business days. For assistance, contact 1-(650)-432-2978. Account numbers must be securely sent to Visa as instructed by the Visa Fraud Control Group. It is critical that all potentially compromised accounts are provided. Visa will distribute the compromised Visa account numbers to issuers and ensure the confidentiality of entity and non-public information. See Visa's "What to do if compromised" documentation for additional activities that must be performed. That documentation can be found at

http://usa.visa.com/download/business/accepting_visa/ops_risk_management/cisp_what_to_do_if_compromised.pdf

MasterCard

Contact your merchant bank for specific details on what to do following a compromise. Details on the merchant bank (aka. the acquirer) can be found in the Merchant Manual at

http://www.mastercard.com/us/wce/PDF/12999_MERC-Entire_Manual.pdf

Your merchant bank will assist when you call MasterCard at 1-(636)-722-4100.

Discover Card

Contact your relationship manager or call the support line at 1-(800)-347-3083 for further guidance.

2. Alert all necessary parties. Be sure to notify:

   a) Merchant bank

   b) Local FBI Office

   c) U.S. Secret Service (if Visa payment data is compromised)

   d) Local authorities (if appropriate)

3. Perform an analysis of legal requirements for reporting compromises in every state where clients were affected. The following source of information must be used: http://www.ncsl.org/programs/lis/cip/priv/breach.htm

4. Collect and protect information associated with the intrusion. In the event that forensic investigation is required the IT Department will work with legal and management to identify appropriate forensic specialists.

5. Eliminate the intruder's means of access and any related vulnerabilities.

6. Research potential risks related to or damage caused by intrusion method used.

Root Cause Analysis and Lessons Learned
Not more than one week following the incident, members of the Incident Response Team and all affected parties will meet to review the results of any investigation to determine the root cause of the compromise and evaluate the effectiveness of the Incident Response Plan. Review other security controls to determine their appropriateness for the current risks. Any identified areas in which the plan, policy or security control can be made more effective or efficient, must be updated accordingly.

Security Awareness
Buncombe County shall establish and maintain a formal security awareness program to make all personnel aware of the importance of cardholder data security. (PCI Requirement 12.6)

Service Providers
Buncombe County shall implement and maintain policies and procedures to manage service providers. (PCI requirement 12.8)

This process must include the following:

- Maintain a list of service providers. (PCI requirement 12.8.1)
- Maintain a written agreement that includes an acknowledgement that the service providers are responsible for the security of the cardholder data the service providers possess. (PCI requirement 12.8.2)
- Implement a process to perform proper due diligence prior to engaging a service provider. (PCI requirement 12.8.3)
- Monitor service providers' PCI DSS compliance status. (PCI requirement 12.8.4)
- Maintain information about which PCI DSS requirements are managed by each service provider, and which are managed by the entity. (PCI requirement 12.8.5)