Information Technology Security Standards and Protocols

Coast Community College District

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DIT 01 - Information Security Program Overview

1.0 Purpose, Scope, and Maintenance

1.1 Purpose

This Information Technology Security Standards (ITSS) document provides an overview of the Coast Community College District (CCCD) information security program and the specific details for each aspect of the program. The central and critical role of information systems at CCCD requires ensuring the protection of these systems.

The ITSS outlines the responsibilities and expectations for security of information assets managed by CCCD. The controls described in this ITSS are collectively known as **CCCD's Security Program**, which is designed to:

- Reflect CCCD business objectives,
- Prevent the unauthorized use of or access to CCCD information systems, and
- Maintain the confidentiality, integrity, and availability of information.

This ITSS is guided by security requirements specific to CCCD operating environment, laws and regulations that are relevant to CCCD and information security best practices. These control requirements are documented and aligned with an internationally recognized industry standard for security, ISO 27002, *Code of Practice for Information Security Management* and designed to meet the requirements of the *Payment Card Industry Data Security Standard*.

1.2 Scope

This ITSS applies to all computer and network systems, software, and paper files owned by and/or administered by CCCD.

Computer and network systems include, but are not limited to, the following items owned or leased by CCCD and used by CCCD personnel for information access: servers, storage systems, personal or laptop computers, network equipment, telecommunications systems and mobile devices.

Software includes operating systems, databases, and applications, whether developed by CCCD or purchased from application software vendors, or shareware / freeware in use within production systems.

1.2.1 Applicability to Staff

This ITSS applies to all CCCD employees, consultants, and contractors and students using CCCD-owned or leased equipment or systems

1.2.2 Applicability to External Parties

This ITSS applies to all computer and network systems, software, and paper files administered or managed by third parties for CCCD. This includes consultants, contractors, temporary workers, interns, students and business partners who are acting on behalf of CCCD and/or access CCCD's information.

Targeted guidance for specific audiences may be created to communicate elements of the Security Program to parties external to CCCD.

1.3 References and Related Documents

Throughout this document, references are made to additional CCCD Information Technology Security Standards, procedures, guidelines, and standards that support or further clarify this Information Security ITSS. Please refer to the following Information Technology Security Standards included in this document for additional information and references including definitions:

- DIT 01: Information Technology Security Program Overview
- DIT 02: Acceptable Use
- DIT 03: Access Control
- DIT 04: Change Control
- DIT 05: Data Classification
- DIT 06: Secure Operations
- DIT 07: Network Security
- DIT 08: Physical Security
- DIT 09: Logging & Monitoring
- DIT 10: Remote Access
- DIT 11: Security Incident Response
- DIT 12: Disaster Recovery

1.4 Maintenance and Support

This ITSS is maintained by the office of the Vice Chancellor of Educational Services and Technology. It will be reviewed at least annually and modified when applicable as a response to any major changes in CCCD's information security or regulatory requirements. Questions related to this ITSS should be directed to security@CCCD.edu.

2.0 Security Organization

CCCD's security organization is designed as a distributed model with central oversight and governance, and consists of both information security and physical security elements. This organization meets periodically to address specific security issues and develop initiatives to continuously improve CCCD information security.

2.1 Security Responsibilities

While information security is ultimately the responsibility of the office of the Vice Chancellor of Educational Services and Technology and his/her designates, everyone who uses CCCD's systems and networks and has access to CCCD information shares in the responsibility for its protection.

2.1.1 Information Security

The Senior Director, Information Technology Infrastructure and Systems for District Information Technology (DIT) coordinates the information security program for CCCD. Those with primary responsibility for information security within District IT are supported by individuals within business areas that include core administrative functions such as Human Resources (HR), Operations, and Business Services. Together, the IT organization and these additional stakeholders have responsibility for different aspects of the Security Program.

2.1.2 Physical Security

Campus and District Office Safety provides a safe and secure environment for students, faculty, and staff, and work with District IT to ensure that facilities and secure areas are controlled.

2.1.3 Data Owners

Data Owners are responsible for data quality and determining the appropriate classification level for the information contained within the respective applications under their purview. All applications have one or more designated Data Owner(s). The Data Owner may delegate responsibilities regarding classification and handling, but is ultimately responsible for determining that the responsibility has been correctly discharged.

2.2 Security Program Governance

The office of the Vice Chancellor of Educational Service and Technology is responsible for establishing Information Technology Security Standards that provide operational oversight and direction to the CCCD information security program.

3.0 Data Classification

Classifying information is at the core of an information security program because it specifies how information will be secured and handled, based on its sensitivity and value.

3.1 Data Classification Objectives

CCCD's strategy is to classify information regardless of medium (paper or electronic) according to its sensitivity and the potential impact of disclosure. In general, information is disclosed to employees or others only when there is a business need-to-know.

Information must be consistently handled according to its requirements for confidentiality and disclosure. Data Owners are responsible for determining the appropriate classification level for the information contained within the respective applications they own.

Information on paper documents or other media has the same classification level as in an electronic format.

District IT will provide appropriate security technology solutions (such as encryption) for electronically stored information should this level of protection be required.

3.2 Data Classification Categories

CCCD data is classified into three categories. The definitions below are supplemented by the information and definitions in the *DIT 05: Data Classification*. The correct classification level is established by the Data Owner.

- **Public** information applies to information made available for public distribution through authorized District or college channels. Examples would include press releases, marketing materials, public web pages, and other data routinely available to the public.
- **Internal** information is available that must be protected due to proprietary or business considerations, but which is not personally identifiable or sensitive, such as internal policies, telephone listings, or data on the intranet that has not been approved for external communication. *Internal* information is generally available to all employees and other authorized users.

- **Restricted** information is sensitive in nature, proprietary, and specific to CCCD's business. Unauthorized compromise or disclosure would likely have serious financial, legal, or regulatory impacts. Examples include personally identifiable data, credit card data, health care data, human resources data, or computer system details. *Restricted* information is only available on a need-to-know basis. It may be appropriate to mark this type of information as "Confidential" or "Restricted Information".

For purposes of this ITSS, the term "personally identifiable information" means an individual's first name and last name or first initial and last name in combination with any one or more items of personal information, such as social security number or other identity verification number, driver's license number or state-issued identification card number, financial account number, credit or debit card number, date or place of birth, and gender; provided, however, that "personally identifiable information" shall not include information that is lawfully obtained from publicly available information, or from federal, state or local government records lawfully made available to the general public.

Both CCCD and any computer service providers are required to comply with regulations designed to protect sensitive and personally identifiable information from unauthorized disclosure and identity theft. Encryption is mandated by many laws and standards for some information transmission or storage. Refer to the handling standards described in *DIT 05: Data Classification* for guidance.

4.0 Human Resources

4.1 Acknowledgement

In addition to the other agreements that may be required, acknowledgement of this Information Technology Security Standard and the *DIT 02: Acceptable Use* are part of the terms and conditions of employment with CCCD. Acknowledgement is required at the time of initial employment and annually thereafter.

Where applicable, the sponsoring CCCD manager must ensure that temporary workers, interns, students, consultants, or contractors working for CCCD have been provided with a copy of this ITSS and *DIT 02: Acceptable Use*. Additionally, it is the responsibility of the sponsoring manager to ensure compliance with this and all CCCD Information Technology Security Standards.

Those employees whose job responsibilities require them to access credit card information will be required to participate in annual security awareness training.

4.2 Employee Administration

The Human Resources department initiates the addition of new access by providing notification to IT and other business areas who administer application security. HR updates the Human Resources System with new hires, transfer, and termination information.

Managers are responsible for notifying HR and IT when an employee, contractor, consultant, temporary worker or intern is no longer associated with CCCD for any reason so that access can be disabled or removed.

Pre-employment background checks are conducted on all employees whose job responsibilities require them to access credit card information and other data classified as restricted (see *DIT 05: Data Classification*).

4.3 Contractors and Temporary Workers

Temporary workers are processed through HR. Contractors must complete an agreement and be approved by the Board. Once a contractor has been approved, managers must work with HR and District IT to submit the appropriate forms so that access can be established.

4.4 Acceptable Use

CCCD's information and technology resources must be used in an approved, ethical, and lawful manner. Employees and contractors must always be alert to actions and activities they may perform that could breach the *DIT 02: Acceptable Use*, which details specific restrictions regarding the Internet, electronic mail, social networking and use of CCCD's computing resources.

All computer systems belong to CCCD and may only be used for business purposes. CCCD personnel should not have an expectation of privacy in anything they create, store, send, or receive via the CCCD computing environment.

If users have any uncertainty on the appropriateness of their actions, they should clarify their understanding with their manager or contact security@CCCD.edu for guidance.

5.0 Physical Security

5.1 Physical Security Controls

Information protection is dependent on adequate physical security. All CCCD information technology facilities employ access control measures to ensure that all facilities remain secure.

Campus Safety and District IT have responsibility for physical security and work together to investigate incidents that could involve information compromise. Campus Safety provides continuous surveillance of the facilities.

5.2 Access Cards to Secure Areas

CCCD secure areas are protected by entry controls designed to allow only authorized personnel to obtain access. Each secure area may have slightly different procedures for entry. Authorized individuals are issued an employee or visitor badge that enables electronic access to exterior doors and authorized internal doors.

Visitors to secure areas must be issued a badge and/or must be escorted by CCCD personnel. Visitors to secure areas must sign in and out daily on a Visitor's Log located at the site's Reception desk where present. Badges must be turned in daily.

All visitors to a CCCD Data Center or facility with network or server equipment must be escorted at all times and must also sign in and out with District IT.

5.3 Equipment and Media Security

Lost or stolen electronic devices must be reported to the District IT Service Desks located at the District Office and Colleges immediately. This includes laptops, smart phones, or removable storage devices that contain CCCD data.

Strict control must be maintained over the internal or external distribution of any media that contains restricted information. CCCD information that is classified as *Restricted* is limited to authorized users on a need-to-know basis and must not be copied to unencrypted devices, e-mailed without encryption or printed without adequate physical controls.

Users must shred or securely dispose of classified information in accordance with established retention policies. If secure disposal methods are required, contact the IT Service Desk.

Contractors or consultants using personal equipment to conduct CCCD business are responsible for physically securing equipment in their possession that contains CCCD-related information. Loss of equipment containing *Restricted* information, even if personally owned, must be reported immediately to the IT Service Desk.

6.0 IT Security Controls

District IT manages the infrastructure and controls for centralized networks, servers, databases and desktop computers. Users must not disable, uninstall, or modify the security software, settings or encryption installed on laptops or mobile devices.

6.1 Security Logging and Monitoring

Logs of key system events and access to sensitive information are in place and administered by District IT personnel. Systems that provide initial entry / authentication into the CCCD network and any application system that processes CCCD *Restricted* information must be configured to capture security audit log data.

Activities of those with privileged accounts (who have a higher level of access on servers or within applications) must also be captured and recorded in security audit logs.

Logs are protected from unauthorized modification or destruction and are retained for a minimum of 180 days (six months) or as required.

System or application administrators must routinely monitor system or application logs for anomalies regarding access to information. Exceptions must be investigated and appropriate action taken.

6.2 Third-Party Access

Third-party (non-employee) access to CCCD's systems must be governed by formal written agreements or contracts. Network connections between the CCCD environment and third parties must follow agreed-upon security procedures. These agreements may require signed Confidentiality and Non-Disclosure statements restricting the subsequent usage and dissemination of CCCD information.

Vendors or other third parties with access to CCCD-owned or leased equipment or systems housed in a CCCD data center are restricted to only the specific equipment and systems they are authorized to maintain or monitor.

7.0 Access Controls

7.1 Access Control

Access to CCCD systems and applications is role-based and will be granted to authorized users based on job classification. Users are limited to the system capabilities they need based on job function or role and as authorized by management.

A warning banner must be displayed on all CCCD login gateways indicating that only authorized users may access the network or system.

CCCD computers are equipped with screen saver locks that will activate after 15 minutes of inactivity as required by PCI-DSS 2.0 section 8.5.15. Users must manually logoff or lock workstations if they will be unattended prior to activation of the screen saver lock.

7.2 System and User Accounts

Accounts are assigned to an individual and may not be shared. Guest accounts must be disabled if a system or application is provided with one. Vendor-supplied default accounts and passwords must be disabled or changed.

System accounts, such as background accounts that are used for internal processing, are exempt from time-based password change requirements

7.3 Passwords

Passwords are confidential and must not be shared. Passwords must be changed on first use or if they have been reset for the user by the IT Service Desk or an administrator.

The IT Service Desk and other administrators resetting passwords must verify the identity of all users requesting a password reset prior to performing the reset.

The primary user password must be changed at least every 90 days as required by PCI-DSS 2.0 section 8.5.9. Accounts used for system administration that have a higher level of privilege must also be changed at every 90 days, or more frequently if the situation warrants. Refer to *DIT 03: Access Control* for further information.

7.4 Account Review

IT senior management and Data Owners or their designees must review the user accounts for the systems and applications they administer and verify the appropriateness of continued access. This review must be performed at least every twelve months.

Access should be disabled immediately upon notification from Human Resources that an employee (or appropriate department in the case of a contractor) is no longer with CCCD and its entities.

7.5 Network Connectivity

District IT manages CCCD's network, and all new wired connections must be requested through them. Wired devices, such as servers, that will be connected to the network must be approved and implemented by District IT teams for their respective networks.

Employees and other authorized users must request remote access and use established connectivity methods to connect to CCCD networks from a remote location. Use of other remote connectivity methods is prohibited. Refer to the *DIT 07: Network Security* and *DIT 10: Remote Access* for additional information.

8.0 Application Development

8.1 Changes to Applications

Application change control is a security issue because unauthorized or accidental changes to applications may impact the integrity and availability of the data. The ability to change applications in production is limited to authorized users.

Change Control processes are required to mitigate risk associated with changing business applications, minimize the impact of change, and provide a stronger linkage between production problems and the events that caused them. Applications managed by IT must be controlled as described in *DIT 04: Change Control*.

8.2 Application Security Standards

Application managers must consider secure coding practices that will prevent or minimize security vulnerabilities, especially for any Internet-facing application. If a third party is hosting an application, data protection controls provided by the third party must be adequate to meet regulatory and contractual requirements for security.

9 Security Incident Response / Disaster Recovery

9.1 Security Incident Response

All users must report suspicious activities or actual occurrence of any unauthorized activities to the IT Service Desk. Notification should be made immediately or as soon as reasonably possible. This includes unauthorized use of accounts, logon IDs, passwords, loss of laptops or other devices, or potential breaches of CCCD computer systems and networks. District IT will complete an Incident Report and conduct any investigation that may be required.

Incidents that involve information compromise, such as a data breach or other loss of information, will be handled according to the *DIT 11: Security Incident Response*. District IT will work with Campus Safety and business areas as required to resolve the incident and ensure that correct notification procedures are followed.

Users detecting potential information security events should immediately report them to the IT Service Desk.

9.2 Business Continuity / Disaster Recovery

Business Continuity Plans are departmental plans that describe in detail how business areas will continue functioning in the event of a major system outage or a disaster. Each business area is responsible for documenting a Business Continuity Plan and designating a Business Recovery Coordinator who will develop and maintain their plan and participate in notification and recovery activities.

Disaster recovery plans describe how IT systems and resources will respond to a disaster situation and restore processing to the business based on CCCD's business objectives and timeframes for recovery of critical applications. District IT will provide overall coordination and management in the event of a disaster, and assemble the necessary recovery and business teams to provide a timely response. Basic information is documented in *DIT 12: Disaster Recovery*.

9.3 Backups

CCCD's data is regularly backed up using defined business requirements for information recovery.

Critical information must be stored on network file servers or production servers to ensure regular and automatic backup and recovery. Critical information should not be stored on personal computers or laptops alone, or on unencrypted personally-owned devices. If additional storage space is needed, contact the IT Service Desk for options.

10.0 Compliance and Audit

10.1 Compliance with Legal Requirements

The Information Security Program supports compliance with state and federal laws and applicable international laws and standards, including HIPAA, PCI, and FERPA.

10.2 Third Party Service Providers

Additional security requirements may be required for any third-party service provider that receives, stores, maintains, processes, or otherwise is permitted access to personally identifiable information provided to them by CCCD.

Whenever selecting and retaining any third party service provider, District IT will (1) take reasonable steps to confirm that the service provider is capable of maintaining appropriate security measures to protect personally identifiable information consistent with all applicable laws and regulations, and (2) require the service provider to contractually agree in writing with CCCD to implement and maintain such appropriate security measures.

10.3 Audit

Audit reviews are conducted by an external auditor and/or by IT consultants on a regular basis. Selected application security reviews may be performed as part of internal audit plans or general controls audits.

11.0 Enforcement and Compliance

11.1 Enforcement

Those detecting violations of this ITSS must report the violation to their direct manager immediately, who will verify the nature of the violation and report it to the District IT Director and the Vice Chancellor of Educational Services and Technology, who will determine the extent of risk that any non-compliance condition presents and remediation activities that are required.

Users who deliberately violate information security standards as outlined in this document will be subject to disciplinary action up to and including termination from employment or association with CCCD.

11.2 Exceptions

Business needs may occasionally require variance from established Information Technology Security Standards. A particular business function may not be able to be performed effectively, reasonably, or cost-effectively if the ITSS is followed. In these instances, the Vice Chancellor of Educational Services and Technology must be notified through email to DIT@cccd.edu, briefly stating the underlying business problem and recommended approach or acceptable alternatives. Alternatives and any potential risks or problems the alternatives may cause will be considered. If a variance is granted, the affected Information Technology Security Standards will be updated and communicated.

DIT 02 - Acceptable Use

1.0 Purpose and Scope

The objective of this ITSS is to outline the acceptable use of electronic assets at Coast Community College District (CCCD). Inappropriate use exposes CCCD to risks including compromise of network systems and services, human resources, and legal issues.

This is one of a series of information security Information Technology Security Standards maintained by the District Information Technology (IT) department designed to protect CCCD information systems.

2.0 Acceptable Use

2.1 Acknowledgement of User Responsibilities

All users must review and acknowledge their understanding of CCCD Acceptable Use ITSS and other job appropriate information security Information Technology Security Standards on an annual basis. Human Resources (HR) will provide the ITSS and acknowledgement links to new staff and contractors upon hire or contract establishment.

2.2 Personal Use

Computers and computer accounts given to users are provided to assist district employees and volunteers in the performance of their jobs. All computer systems belong to CCCD and are intended for business and instructional use. Users are expected to exercise good judgment regarding the reasonableness of personal use of CCCD information systems and assets. Personal use should not conflict in any way with business objectives or interests, organizational values, or standards of business conduct. CCCD prohibits the use of any software not licensed or approved by District IT. If unlicensed software is found to reside on a CCCD computer, it must be removed.

CCCD considers all information transmitted through or stored in its systems, including e-mail, instant messaging (IM) or chat data, and voice mail messages, as CCCD information. All files and other information stored on CCCD systems, even if considered "personal" by an employee, are and remain the property of CCCD. CCCD may review or use such information as it deems appropriate.

Where allowed by law, CCCD's District IT reserves the right to monitor activities that occur on its systems in order to troubleshoot system problems, disruptions or outages. For this reason, users should not have an expectation of privacy for anything they store, create, send, or receive on a District or college system. Suspected inappropriate use of systems by individuals may also be investigated in order to protect the organization.

2.3 Confidentiality

CCCD has/shall adopt a Data Classification (see DIT 05) ITSS which categorizes different types of information and how it will be protected based on its value and sensitivity. Sensitive, personally

identifiable, and customer information are classified as *Restricted*, and must be kept confidential at all times. This information is accessible only to those CCCD staff who need such access in order to perform their jobs, or to others who have been expressly authorized by CCCD for specific limited purposes. Unauthorized disclosure of information that has been classified as *Restricted* could cause great harm to CCCD, and may be prosecuted by law.

Restricted information must be protected from disclosure to third parties (non-employees) by default. Third parties may be given access to CCCD information only when a demonstrable need-to-know exists. Such disclosure may be authorized by CCCD management or by contract, such as with a temporary worker, consultant, or service provider. A non-disclosure agreement may be required as directed by the relationship and CCCD legal requirements.

Restricted information may be stored in designated locations only and must be securely deleted when it is no longer required. If stored online, on portable devices or on tape, *Restricted* information requires encryption so that it cannot be read by unauthorized persons. *Restricted* information that is on paper or other media must also be stored securely. Refer to the Data Classification Handling Procedures for additional information on this topic.

Specific information about CCCD's computer network, information system security, security controls, or potential vulnerabilities may not be distributed to persons who do not have a demonstrable need-to-know, and without prior approval from the Senior Director, Information Technology Infrastructure and Systems. All information systems assets provided by CCCD remain the sole property of CCCD. Any data or intellectual property created by the user, including voicemail and electronic messages, remain the property of CCCD and should not be removed, copied or shared with any person or entity except as part of the user's normal job responsibilities.

2.4 Electronic Messaging

CCCD has an electronic mail (e-mail) network and provides instant messaging (IM) services. Users are responsible for using these technologies responsibly and within the following procedures:

- CCCD's e-mail system is not to be used to solicit for commercial ventures, religious or political causes, outside organizations or other non-job-related solicitations.
- Sending unsolicited e-mail messages is prohibited, including the sending of junk mail or other advertising material to individuals who did not specifically request such material.
- Creating or forwarding chain letters or pyramid schemes of any type is prohibited.
- Users must not create any messages that may be considered offensive or disruptive. Examples of messages deemed to be offensive are any which contain sexual implications, racial slurs, gender-specific comments or any other comment that offensively addresses someone's age, sexual orientation, religious or political beliefs, national origin or disability.
- CCCD business communications transmitted by e-mail must use the appropriate District e-mail address (<userid>@cccd.edu, and employ the standard e-mail signature for external communications. Falsifying e-mail headers or routing information so as to obscure the origins of the e-mail or identity of the sender is a violation of this Information Security Standard.
- Because e-mail records and computer files may be subject to discovery in litigation, users must avoid making statements in e-mail that would not reflect favorably on CCCD if disclosed in litigation or otherwise. Delete unnecessary e-mail promptly.

- Unauthorized access to others' e-mail accounts is prohibited.
- Information classified as *Restricted* (sensitive, personally identifiable, or student information) must not be e-mailed over public networks or stored on portable devices without encryption. Refer to the Data Classification ITSS3726 for additional information.
- Caution must be used when opening e-mail attachments or following hypertext links received from unknown senders, which may contain malware or viral code.

2.5 Social Networking Technologies

Social networking tools (blogs, online social networks, Facebook, Twitter, etc.) provide an open exchange of information and a means to establish relationships with colleagues and members of the public. These tools represent a communication model where a fine line exists between business and personal statements. Employees who choose to participate in social networking technologies must know and follow CCCD's Employee Handbook and review the Social Networking Guidelines.

CCCD's or another person or company's confidential or proprietary information is not to be shared. Users must ask permission to publish or report on conversations that may have intended to be private or internal to CCCD. Check with the appropriate PIO or the Legal department if you have any questions about what is appropriate to publish or say online.

2.6 Use of CCCD Assets

Using CCCD electronic assets for abusive, unethical, or inappropriate purposes will not be tolerated and may be considered grounds for disciplinary action, including termination of employment. Unacceptable use of electronic assets includes, but is not limited to:

- Illegal activities
- Revealing or publicizing CCCD intellectual property or proprietary information for unapproved or non-business-related reasons
- Use or distribution of unlicensed software
- Unauthorized use of copyrighted materials
- Sharing of user names and/or passwords
- Leaving *Restricted* or any confidential or sensitive materials in plain sight without taking protective measures
- Transferring or storing information on untrusted third party servers. Contact IT for approved locations / services.
- Presenting your own viewpoints or positions as those of CCCD, or attributing them to CCCD
- Effecting security breaches or disruptions of network communications
- Circumventing user authentication or security of any computer, network or account
- Facilitation of the compromise of CCCD information security controls
- Disabling software designed to prevent viruses or malware, or disabling screen savers or encryption methods
- Providing information about, or lists or organizational charts of CCCD employees to external parties.

3.0 Enforcement

Those detecting violations of this ITSS must report the violation to their direct manager immediately, who will verify the nature of the violation and report it to District IT and/or Human Resources as appropriate. CCCD Management will determine the extent of risk that any non-compliance condition presents and remediation activities that are required.

Users who deliberately violate Information Technology Security Standards will be subject to disciplinary action up to and including termination from employment or association with CCCD.

DIT 03 – Access Control

1.0 Purpose and Scope

The objective of this ITSS is to provide internal controls for access to the Coast Community College District (CCCD) sites, information and applications. This ITSS is part of a series of IT Security Standards governing the secure use and access of Information Technology Systems and Services.

Access controls may be physical (such as locks and badges), administrative (such as the ITSS to safeguard passwords) or technical (protections enforced by software settings or privileges). These controls are designed to either allow or restrict the ability to view, update or delete information within the CCCD networks and systems, or paper documents.

2.0 Access Control

2.1 Access Control Principles

There are three basic access control principles at the CCCD:

- All information is made available only to those with a legitimate "need-to-know". Access is provided on this basis, guided by job requirements and data classification.
- Access controls for CCCD systems will be provided in a manner that promotes individual accountability. Audit trails and monitoring of access establishes accountability and allows for follow-up of access violations and security breaches.
- Users with the highest levels of privilege on a computer system will be restricted to the least privileges necessary to perform the job.

2.2 Authentication to CCCD Systems

Authentication is the verification of a user's claimed identity. Identification is required by all individuals prior to gaining access to secured CCCD facilities or systems such as server rooms, cash handling rooms and other areas where security is in the interest of the District.

Internal (CCCD personnel) and external (non-personnel) users must provide a valid and unique user ID in order to authenticate to the network. In addition to a unique ID, the authentication method must include at least one of the following:

- A password or passphrase
- Token device or smart card
- Biometric

If the new user is a contractor or non-employee, the user ID will be identifiable as such by its naming convention.

Group, shared, or generic accounts do not provide accountability, and are not to be used for network or application authentication. Some exceptions may apply to this requirement, such as a system account that is required for server or network processing.

Physical access to secured facilities requires that CCCD users possess appropriate access badges or credentials in order to enter all sites. Some areas, such as computer rooms, may require additional levels of access, cards or keys. Refer to the *DIT 08: Physical Security* for specific information.

2.3 Authorization to Applications

Addition, modification and deletion of user IDs and other credentials must be controlled. Data Owners (or their designate) have responsibility for making security decisions about applications which process data for which they are responsible. Assuming the role of Owner may require:

- Approving and re-certifying access by users to systems or data they control.
- Classifying data belonging to the application system they manage (determining the level of confidentiality or classification that should be assigned to an application's data, which will dictate its level of protection).

Access to certain functions may be provisioned automatically based on job position. Otherwise, the appropriate IT department, as authorized by Data Owners, must approve all new accounts except for those provisioned automatically. Each request for access must contain written and/or electronic evidence of approval by the Owner or District IT. Extension authorizations for contractor accounts must be applied by District IT to provide an audit trail.

Access requests must specify access either explicitly or via a "role" that has been mapped to the required access. Outside of initial standard network access provided based on the job position of the users, access to additional applications or capabilities is discretionary and must be both requested and approved by the Data Owner. For additional access, users should submit an access request.

Departmental Security Administrators may set up access for some applications. District IT will pass the request on to the relevant team to set up access.

Remote access is not automatically provided to all users and must be requested and approved. Refer to the *DIT 10: Remote Access* for additional information.

2.4 Security Administrators

The appropriate IT department is responsible for administering overall system access within CCCD, and so may request information from appropriate managers or administrators, such as who has access to their applications, and the procedures that they have put in place to provision them.

Some users (in District IT or business departments) may have a higher level of access privilege in order to administer systems or applications. They may have the ability to add, modify, or delete other users for the applications they control.

Systems administrators, under management supervision, have a responsibility to maintain appropriate access controls for the applications they maintain in order to protect information from unauthorized access. The number of administrators should be tightly controlled and limited to as few as necessary.

Security administrators should only use their privileged accounts to carry out administrative tasks that require privileged access. A non-privileged account should be used to perform routine tasks.

2.5 Passwords

Users of the CCCD computer systems will be provided with one or more unique accounts and associated passwords.

Users are held accountable for work performed with the account(s) issued to them, and are responsible for the confidentiality of their passwords. Passwords must be difficult to guess and kept private. Users must not disclose their password to anyone.

The following rules apply to password composition:

1. Must not be left blank when a new account is created. New passwords must not be the same for all users.
2. Must have a minimum length of 8 characters
3. Must contain both numeric and alphabetic characters
4. Must contain at least 1 capital letter.
5. New passwords must be changed immediately upon first use
6. New passwords must not be the same as the four previously used passwords
7. Passwords must be changed at least every 180 days (some passwords within IT are exempt from this requirement)

If a user requests a password reset via phone, email, web, or other non-face-to-face method, Administrators who have the ability to reset passwords must verify the user's identity, such as by providing an element of personal information, prior to changing the password.

2.6 Account Lockout

Accounts will also be locked after six (6) invalid login attempts. Once an account is locked, a System Administrator or authorized student services representative is required to reset the account after the user's identity has been verified. The lockout duration will be set to a minimum of 30 minutes or until an administrator enables the account.

With the exception of some system accounts, user accounts have a session idle time of 15 minutes after which the session will be locked.

2.7 Emergency Accounts

An Emergency Account / User ID will be established when access is needed to diagnose or correct a problem. The request to create the Emergency ID must be made through the appropriate District IT Manager or Administrator. The ID will be enabled only for a 24-hour period unless a specific time period is requested.

The Requestor must inform the appropriate District IT manager upon completion of the work so that the ID can be disabled.

2.8 Termination of Access Privileges

Supervisors are responsible for notifying Human Resources if personnel will be leaving CCCD. HR will contact District IT Security Administrators as required so that access is removed. Access must be disabled immediately upon notification.

2.9 Review of Access

A bi-annual audit of computer resource authorizations to confirm that access privileges remain appropriate will be conducted by appropriate IT staff. After an additional sixty (60) days, inactive accounts will be purged. These requirements may not apply to certain specialized accounts (e.g., Windows Administrator, root).

District IT working with HR, may periodically validate employment and may immediately suspend users who are on leave-of-absence or extended disability. At least annually, IT will request that Data Owners verify continued access by users who have access to their applications.

District IT and/or external auditors will periodically review security administration procedures for specific applications, and may employ monitoring tools to audit and verify access controls.

2.10 Payment Card Industry Requirements

CCCD adheres to the requirements of the Payment Card Industry Data Security Standard (PCI). The following additional requirements are mandatory for systems that store, process, or transmit cardholder data. References to the relevant PCI section numbers are in parentheses after each requirement:

- Implementation of an automated access control system (7.1.4)
- The access control system must cover all (PCI) system components (7.2.1)
- The access control system must assign privileges based on job classification and function (7.2.2)
- The access control system must be set to a default "deny all" setting (7.2.3)
- Render all passwords unreadable during transmission and storage on all system components using strong cryptography (8.4)
- Set the lockout duration to a minimum of 30 minutes or until administrator enables the user ID (8.5.14)
- Authenticate all access to any database containing cardholder data. This includes access by applications, administrators, and all other users (8.5.16)

DIT 04 – Change Control

1. Purpose and Scope

The objective of this ITSS is to ensure a standardized method for handling changes to Coast Community College District (CCCD) infrastructure and associated software. Change control promotes the stability of the environment, which is essential to its security and integrity.

This is one of a series of information security Information Technology Security Standards maintained by the District Information Technology (IT) department designed to protect CCCD information systems.

2.0 Change Control

A change is any modification or enhancement to an existing production system. Modifications can be in the form of updates to existing data, functionality, or system process.

2.1 Change Roles

The following roles have been established to guide the Change Management process. Refer to the Change Management departmental procedures on the District Information Technology SharePoint site for details on the change workflow and steps.

- **Customer**: the individual or entity initiating a change, which may be either an internal CCCD employee or contractor, or an external organization.
- **Product Owner**: the role that qualifies and prioritizes Change Requests from the Customer. The Product Owner may represent interests within a specific organizational entity.
- **Change Management Committee (CMC)**: one or more organizational bodies that review and prioritize Change Requests submitted by Product Owners. We currently do not have such a committee. What do you have in mind? I suggest removing this reference at this time until it is clear how this would work.
- **Development Team**: the internal CCCD group responsible for implementing and/or delivering the Change Requests.

2.2 Process Tools

The primary tools used to manage Change Requests are the District-wide service desk system (Footprints) and an Application Lifecycle Management tool.

2.3 Change Requirements for locally maintained software

The basic requirements for Change Management are:

- Changes that are part of the production environment must follow defined procedures by submitting a Change Request through the service desk system.
    - The Customer submits the Request

    - The Request is reviewed by District IT, the relevant Product Owner, and further reviewed and prioritized by the CMC.
    - Once approved by the CMC, the development team schedules and implements the change.
- All changes must be authorized by the appropriate management.
- All changes to production software must be completely and comprehensively tested.
- All required documentation associated with the changes must be included with the software delivery.
- Program source code must be protected by restricting access to those within the Development team who have a need-to-know. Segregation of duties must be maintained.
- Version controls for source code must be in place to maintain application integrity.
- All change requests must be accompanied by back-out procedures to be used in the event of unexpected error conditions.
- Production data must not be used for testing data unless it has been scrubbed.

2.4 Change Requirements for vendor maintained software

Software provided by vendors or other organizations must follow these basic requirements for Change Management:

- District IT is notified by the vendor or customer of an available update or patch to a software package.
- The update must be requested through the service desk system.
- The update must be authorized by the appropriate user management.
- The update must be thoroughly tested in a test environment and approved by the customer prior to installation.
- Production data must not be used for testing data unless it has been scrubbed.
- The update must be accompanied by back-out procedures to be used in the event of unexpected error conditions.

2.5 Change Requirements for infrastructure related technology

Purpose built hardware containing updateable operating systems including but not limited to network switching hardware and general purpose computing hardware such as servers and desktops must follow these basic requirements for Change Management where the device provides services to end users:

- District IT is made aware of an update or patch to a device.
- The update's criticality is assessed to determine appropriate implementation scheduling.
- Where possible, the update is tested in a non-production environment to evaluate the service impact.
- District IT discuss the impact and scheduling of the update.
- The rollout of the update is scheduled and announced at the weekly District IT Infrastructure stand up meeting.
- Backups of the existing configuration settings are verified up to date and complete.
- The rollout is completed and functional testing is performed to ensure there is no user impact to services.
- Completion of the update is announced and the update is documented in the infrastructure change control logs.

2.6 Application Security Knowledge Transfer

Changes related to new or significant implementation efforts should include a knowledge transfer of relevant security information from the Development team to the Network and Security staff and other interested parties.

2.7 Payment Card Industry Considerations

CCCD adheres to the requirements of the Payment Card Industry Data Security Standard (PCI). The following additional requirements are mandatory for systems that store, process, or transmit cardholder data. References to the relevant PCI section numbers are in parentheses after each requirement:

- Development / test and production environments must be separate (6.4.1)
- Separation of duties between development/test and production environments (6.4.2)
- Production data (live PANs) are not used for testing or development (6.4.3)
- Removal of test data and accounts before production systems become active (6.4.4)
- Change control procedures for the implementation of security patches and software modifications must include the following:
    - Description of the impact of the change (6.4.5.1),
    - Documented change approval by authorized parties (6.4.5.2)
    - Functionality testing to verify that the change does not adversely impact the security of the system (6.4.5.3)
    - Back-out procedures (6.4.5.4).

DIT 05 – Data Classification

1.0 Purpose and Scope

The purpose of this ITSS is to provide information security requirements for ownership, classification, and protection of Coast Community College District (CCCD) information assets.

An information asset is a definable piece of information, regardless of format, that is recognized as valuable to the organization. Classifying information is at the core of an information security program because it specifies how information, based on its sensitivity and value, will be protected from unauthorized disclosure, use, modification or deletion.

This is one of a series of information security Information Technology Security Standards maintained by the District Information Technology (DIT) department designed to protect CCCD information systems.

2.0 Data Classification

Users of CCCD systems need to understand the importance of securely handling the information they are able to access and the standards that have been created to ensure data protection. For the purposes of this ITSS, data includes both electronic and paper.

Specific protection requirements are mandated for certain types of data, such as credit card information, personally identifiable information, or financial data. Where information is entrusted to us by our students, employees, or business partners, their expectations for secure handling must be met. Consistent use of this Data Classification ITSS will help to ensure that we maintain adequate data protection.

2.1 Classification of Data Assets

CCCD classifies information regardless of medium (electronic or paper) according to its sensitivity and the potential impact of disclosure.

In general, information is disclosed to employees or others when there is a business need-to-know. Information must be consistently handled according to its requirements for confidentiality and disclosure.

Data Owners, defined below, are responsible for determining the appropriate classification level for data for which they are responsible or for the same information maintained on paper documents.

If the classification level is set too high, the cost of protection will be excessive in relation to the value or sensitivity of the data. If it is set too low, the risk of compromise could be increased. Downgrading to a lower classification at a future date is appropriate should conditions warrant.

2.2 Data Ownership

Every business application must have one or more designated Data Owners. The Data Owner is the person responsible for (or dependent upon) the business process associated with an information asset. The Data Owner is knowledgeable about how the information is acquired, transmitted, stored, deleted, or

otherwise processed, and is therefore best suited to make decisions about the information on behalf of the organization.

The Data Owner is ultimately responsible for security decisions regarding the data. The Data Owner will work with the appropriate campus or District IT department to ensure that minimum security standards are met. The District Information Technology (DIT) department will provide appropriate security technology solutions (such as system or application security controls or encryption methods) based on classification level.

If the Data Owner has chosen to outsource processing or storage of information at a location outside of CCCD's control, such as on a cloud-based service, the Data Owner retains full accountability for security of the information. Security controls that are required to be performed by the third party service provider must be detailed in the contract with that provider, and monitored by the Data Owner.

The Data Owner's responsibilities include:

- Classifying data for which they are responsible. This includes determining the level of confidentiality that should be assigned to information, which will dictate its level of protection
- Working with DIT to select security controls that are appropriate to the level of sensitivity, value or confidentiality of the application or data it processes
- Ensuring that third parties to whom data has been entrusted meet CCCD security requirements
- Establishing and maintaining response plans which identify actions to be taken for their area of control, such as Security Incident Response processes and defined Business Continuity Plans.
- Depending on location, provide District IT management with administrative access in order to maintain continuity of access to systems and services.

2.3 Data Classification Categories

Information that is owned, used, created or maintained by CCCD must be classified into one of three categories:

- Public
- Internal
- Restricted

2.3.1 Public

Data classified as *Public* is suitable for routine public disclosure and use. Security at this level is the minimum required by CCCD to protect the integrity and availability of this data. Examples of this type of data include, but are not limited to, data routinely distributed to the public such as publicly accessible web pages, marketing materials, and press statements.

2.3.2 Internal

Internal data is information about CCCD or internal processes that must be guarded due to proprietary or business considerations, but which is not personally identifiable or otherwise considered confidential. This classification may apply even if there are no regulatory or contractual requirements for its protection.

Data in this category is generally available to employees, contractors, students, or business associates, but is not routinely distributed outside CCCD. Some *Internal* data may be limited to individuals who have a legitimate business purpose for accessing the data, and not be available to everyone. Examples of *Internal* data may include:

- CCCD procedures and manuals
- Organization charts
- Data which is on the internal Intranet (SharePoint), but has not been approved for external communication
- Software application lists or project reports
- Building or facility floor plans or equipment locations

2.3.3 Restricted

Restricted data is information that is sensitive in nature, and may be proprietary, personally identifiable, or otherwise be sensitive. Unauthorized compromise or disclosure of the information would be likely to cause serious financial, legal, or reputation damage to CCCD, or result in embarrassment or difficulty for CCCD, its employees, or students. *Restricted* data may be protected by statutes, regulations, or contractual requirements. Disclosure is limited to those within CCCD on a "need-to-know" basis only. Disclosure to parties outside of CCCD must be authorized by appropriate management and covered by a binding confidentiality or non-disclosure agreement.

Examples include:

- Personally identifiable (as defined below) information of our employees, contractors, or students
- HR, employee or payroll records
- Student data
- Audit reports or results
- System and network configuration details, including diagrams, passwords, programs or other IT-specific documentation
- Intellectual property
- Health records
- Legal documents

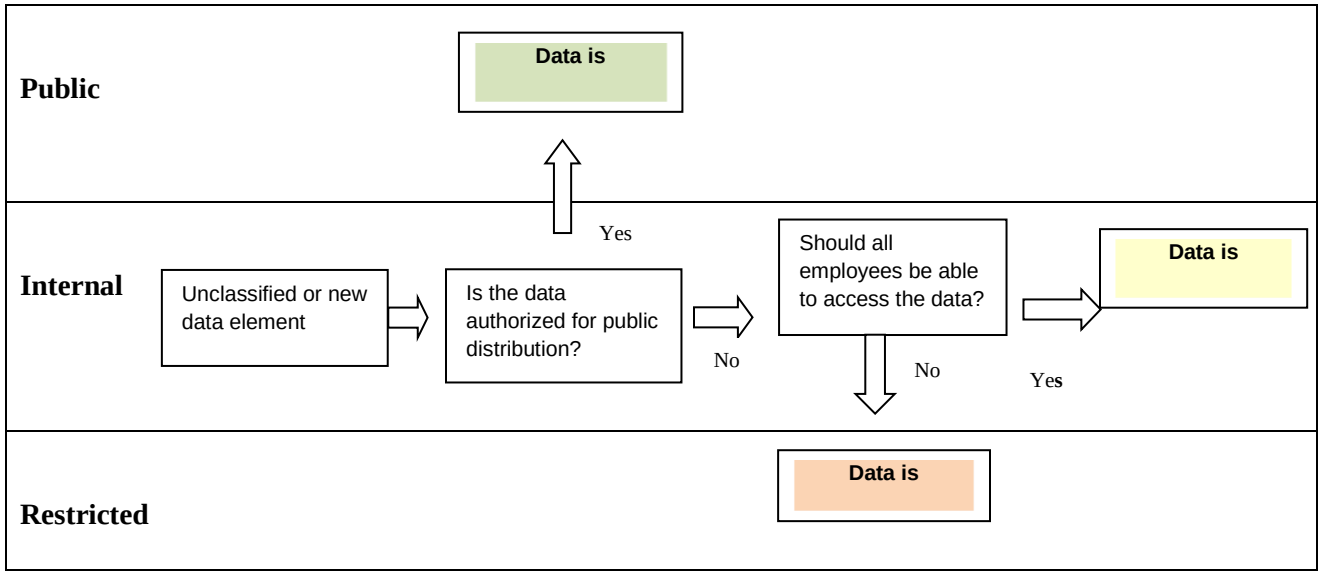
For purposes of this ITSS, the term "personally identifiable information" means an individual's first name and last name or first initial and last name in combination with any one or more items of personal information, such as social security number or other identity verification number, driver's license number or state-issued identification card number, student and/or employee ID numbers, financial account number, credit or debit card number, date or place of birth, and gender; provided, however, that "personally identifiable information" shall not include information that is lawfully obtained from publicly available information, or from federal, state or local government records lawfully made available to the general public.

2.4 Minimum Classification

All information should be assumed *Internal* unless classified otherwise.

2.5 Classification Flow Chart

The Classification Flow Chart on the following page is intended to assist a Data Owner, document creator or user to assist in quickly determining the classification of a data element or document.



2.6 Information Access

The Data Owner makes access decisions regarding information they are responsible for, and must be consulted when access decisions are to be made, extended, or modified. Please refer to DIT 12 - Information Security – Access Control for additional information.

2.7 Periodic Review

Information asset classifications must be reviewed by the Data Owner at least every two years, or when necessary based on business need. Review records must be maintained by Data Owners documenting the review processes took place, for audit purposes.

DIT 06 – Secure Operations

1.0 Purpose and Scope

The objective of this ITSS is to describe policies for secure operations of Coast Community College District (CCCD) information and systems. The following topics are covered:

- Operations Processing
- Virus Management
- Patches and Updates
- Backup AR
- Third Party Management

2.0 Secure Operations

2.1 Operations Processing

All system scheduling, jobs, and dependencies must be documented. This documentation must include job start times, latest job completion times, delay procedures and handling procedures in case of failure or error.

Operating system and application processing, restart and shutdown procedures must be documented.

Application back out, restart and shutdown procedures with emergency contact information must be provided by the Applications Development team and made available to District IT operations personnel.

Refer to *DIT 08: Physical Security* for data center access and other physical security controls.

2.2 Virus Management

All applicable systems must be configured with District IT-approved anti-virus software. The software must be configured to scan for viruses in real-time. Anti-virus programs must be capable of detecting, removing, and protecting against all known types of malicious software.

All systems with anti-virus software must be configured to update virus signatures on a daily basis.

End users must not be able to configure or disable the software.

All anti-virus mechanisms must generate audit logs to aid District IT in detecting and responding to virus outbreaks.

All CCCD employees may obtain approved anti-virus software to install on CCCD assets from District IT.

2.3 Patches and Updates

CCCD must ensure that all system components and software are protected from known vulnerabilities by installing the latest vendor-supplied firmware, security patches, hot fixes and service packs found to be applicable to CCCD computing resources.

District IT system administrators must keep up with vendor changes and enhancements. New or modified non-urgent patches must be scheduled and installed within one month of release. Urgent patches that address security vulnerabilities must be installed as soon as is feasible without introducing instability or impacting service availability.

Where feasible, patches must be tested in a test environment prior to production deployment. Testing must ensure that systems function correctly.

Changes to servers and networks should be tested prior to implementation and follow normal change control management procedures.

District IT must be alert to identifying new security vulnerabilities by monitoring available vendor or industry security sources. Hardening and configuration standards must be updated as soon as practical after new vulnerabilities are found.

2.4 Software and Asset Management

The Electronic Communications and the Acceptable Use DIT 01 set forth usage procedures for critical technologies that include e-mail usage and Internet usage and defines proper use of these technologies. District IT may also issue mobile devices (such as laptops or removable storage devices), and will maintain a list of issued devices and personnel with access to assist in determining owner, contact information and purpose.

District IT will maintain a list of company-approved products and software.

2.5 Backup and Media

Users must store all critical files on the local area network so that they can be properly backed up. Any media containing backup data that is stored onsite must be classified so that operations personnel can determine the sensitivity of the data stored on tape or other formats. Refer to the Data Handling Procedures for classification and handling information.

Any backup media that must be transferred that contains *Restricted* information must be sent by secured courier or other delivery method that can be accurately tracked. Management must approve any and all media that is moved from a secured area

Strict control must be maintained over the storage and accessibility of backup media. Inventory logs of all media must be maintained and reviewed at least annually.

Media must be destroyed when it is no longer needed for business or legal reasons. Data retention requirements must be documented.

2.6 Third Party Management

A third party user is a non-CCCD employee or entity that is authorized to access CCCD systems and networks. Examples of third party users include consultants, contractors, temporary employees, interns, vendors, business partners, service providers, and suppliers of products, services, or information.

A process for engaging service providers must include proper due diligence prior to beginning the engagement. A list of all third party providers must be maintained.

Network connections between the CCCD environment and third parties must follow agreed-upon security procedures and/or confidentiality requirements. Such connections and other third-party access to CCCD's systems must be governed by formal written agreements or contracts.

These agreements may require signed Confidentiality and Non-Disclosure statements restricting the subsequent usage and dissemination of CCCD information.

Vendors or other third parties with access to CCCD-owned or leased equipment or systems housed in CCCD data center are restricted to only the specific equipment and systems they are authorized to maintain or monitor.

2.6.1 HIPAA Third Party Agreements

HIPAA regulations specify that formal written agreements must be established with each party (often considered a "business associate") who will access protected health information (PHI). The parties must agree to protect the integrity and confidentiality of the information being exchanged, and the agreement would clearly define responsibilities of both parties.

- CCCD security policies and security mandates, including any fines and penalties that may be incurred for HIPPA or PCI non-compliance for lack of compliance with the regulations
- Ownership and acceptable uses of PHI and other classified information
- Requirements for business continuity by the third party, in the event of a major disruption, disaster or failure
- Audit provisions for CCCD or CCCD-approved entities in the event of a data compromise. Provisions to ensure that CCCD, or a CCCD-approved auditor, will be provided with full cooperation and access to conduct a thorough security review after a security intrusion. The review will validate compliance with CCCD standards and HIPAA regulators for protecting PHI and other CCCD information.
- Security of PHI and CCCD information during third party contract terminations or data transfers.

2.6.2 PCI Third Party Requirements

CCCD maintains a program to monitor its PCI DSS service providers' compliance status at least annually.

Payment Card Industry Data Security Standard (PCI DSS) requires that shared hosting providers protect each entity's hosted environment and cardholder data. These providers must meet specific requirements as detailed in Appendix A of the PCI DSS.

A written agreement that includes an acknowledgement from any PCI service providers must be maintained to ensure that the third party accepts responsibility for the security of cardholder data the service providers possess.

All service providers providing PCI services must be monitored at least annually to ensure their continued compliance with PCI DSS.

DIT 07 – Network Security

1.0 Purpose and Scope

The objective of this ITSS is to describe controls required to protect Coast Community College District (CCCD) information and systems. Network infrastructure must be configured securely in order to protect CCCD systems and maintain network integrity and availability. Effective network security will reduce potential vulnerabilities and help to enforce secure access to CCCD information and technology.

2.0 Network Security

The District IT manages, administers, and maintains CCCD infrastructure, network components, and firewalls.

2.1 General Network Controls

System configuration standards are in place for critical network and server components that are managed by District IT. Standards must address known security vulnerabilities and industry best practices, and provide specifications for "hardening" the native operating system or platform from known security weaknesses.

District IT must maintain appropriate network documentation, including a high-level network diagram specifically noting inbound and outbound network connections. This must include wireless network components and show connections to all networks, any cardholder data (PCI) locations, and wireless networks.

Network diagrams and configuration details must not be disclosed to unauthorized parties unless identifying IP addresses and names have been removed. The data classification level for sanitized (IP addresses, server names, and other identifying elements removed) diagrams is *Internal*. Unsanitized network diagrams have a data classification of *Restricted*. Refer to the *Data Classificatio: DIT 05* for classification requirements.

Only necessary and secure services, protocols, daemons, etc., should be enabled as required for the function of the system. For any required services, protocols or daemons that are considered to be insecure, appropriate security features must be enabled. For example, secure technologies such as SSH, S-FTP, SSL, or IPsec VPN should be used to protect insecure services such as NetBIOS, file-sharing, Telnet, FTP, etc.

Documentation and business justification for use of all services, protocols, and ports allowed, including documentation of security features implemented for those protocols considered to be unsecure must be maintained by District IT.

Vendor-supplied defaults must be changed before installing a system on the network, including but not limited to passwords, simple network management protocol (SNMP) community strings, and elimination of unnecessary accounts.

System security parameters must be configured to prevent misuse. All unnecessary functionality, such as scripts, drivers, features, subsystems, file systems, and unnecessary web servers, must be removed.

Publicly accessible network jacks should be restricted to authorized systems.

2.2 External Connections and Firewalls

District IT management must approve all new external connections, inbound or outbound, to the CCCD internal network. All connections into and out of the internal network must be documented and managed.

Firewalls must be deployed to restrict inbound and outbound connections to the CCCD network.

New network connections requested to be allowed through CCCD firewalls must be approved by IT Management and require a business case justification.

Ad-hoc modification of firewall rules can jeopardize the security of CCCD network. Established change control procedures must be followed for all firewall changes.

Where technically possible, firewall rules should be tested prior to implementation.

A review of all firewall and routers must be reviewed every six months. This activity must include a review of the specific ports/services/protocols allowed into the environment and proper documentation of the review.

For specific processes and procedures, refer to the Change Control DIT 02 and Firewall Security Procedures.

2.3 Wireless Security

Wireless connectivity is provided as a convenience for staff, students, and authorized users utilizing College campus (OCC, GWC, and CCC) wireless implementation. Either a student or staff SSID must be entered to gain access. Refer to Wireless Security Procedures for additional information on using wireless services.

Scanning for rogue access points is handled by District Infrastructure IT teams using Cisco WLC and Forescout NAC appliance technology.

Any other wireless network implementations must be approved by District IT. Ad-hoc wireless networks are not permitted.

Wireless vendor defaults, including but not limited to default wireless encryption keys, passwords, and SNMP community strings, must be changed prior to implementation.

District IT will test for the presence of wireless access points and detect unauthorized wireless access points on a quarterly basis.

2.3.1 Wireless Environments and PCI

Wireless networks are not presently used applications that may store, process or transmit cardholder data. In the event that wireless is used for any part of this environment, perimeter firewalls must be installed between any wireless networks and the cardholder data environment, and configure these firewalls to deny or control (if such traffic is necessary for business purposes) any traffic from the wireless environment into the cardholder data environment.

For wireless environments connected to the cardholder data environment or transmitting cardholder data, vendor defaults must be changed. This includes but is not limited to default wireless encryption keys, passwords, and SNMP community strings.

2.4 Encryption

Encryption scrambles sensitive information that is stored or transmitted electronically. Cryptographic solutions must adhere to Federal Information Processing Standards (FIPS). Encryption must be used at CCCD in the following situations.

2.4.1 Passwords

All passwords must be encrypted and unreadable. This includes password files for users, firewalls, routers, operating systems, applications, databases, and web servers.

Password or credential files stored on third party platforms must also be encrypted.

2.4.2 Restricted Data

The Data Classification Policy describes how data is categorized based on its sensitivity, need for confidentiality, or value to CCCD. Data classified as *Restricted* is the most sensitive category. Its unauthorized disclosure may violate regulations or standards, such as PCI, or contractual agreements with third parties or service providers.

Restricted data may exist in applications, databases or files. Various access controls protect data when in its original location, but when copied, reproduced or transmitted, the original protections are lost. However, the classification and level of protection for a data element must travel with it regardless of its location or format.

Storing *Restricted* data on unencrypted removable devices, personal drives, or various types of USB storage may expose sensitive or confidential data to unauthorized disclosure and is against CCCD Information Technology Security Standards. If transporting or storing restricted data must be on a removable device, users must work with District IT to ensure the data is secure.

If *Restricted* data is copied from its original location (e.g., to other files, removable devices, or on backup media) it must be encrypted. If sent via e-mail or other transmission means on public networks, it must be encrypted. Refer to the Encryption Procedures for specific encryption methods and procedures.

2.4.3 Remote Administrator Access

Remote access by security, system, or firewall administrators to perform maintenance or troubleshoot problems presents a greater security risk due to the elevated privileges these individuals possess. System Administrators must connect securely using the SSL VPN to ensure that communications with CCCD networks from a remote location are over an encrypted channel. This includes any non-console administrative access. Two-factor authentication is required where technically feasible.

2.4.4 Key Management

Key management procedures must be documented for all processes and procedures involving encryption keys, especially if used for cardholder data. PCI DSS requirements mandate strong keys, secure key distribution and storage, periodic key changes, and other requirements. Please refer to the Encryption Procedures for detailed information.

2.5 Scanning and Vulnerability Management

District IT management must be informed of information security issues and vulnerabilities applicable to CCCD computing systems. When security issues are identified, District IT is responsible for notifying appropriate personnel, including system and network administrators and IT management.

The primary method for identifying new threats as they arise will be through vendor and security Internet mailing lists. CCCD will identify and assign a risk ranking to newly discovered security vulnerabilities. As appropriate, platform hardening standards must be updated to reflect measures required for protection from any newly discovered vulnerability.

CCCD performs quarterly external vulnerability scans on critical and networks in-scope for PCI compliance. External vulnerability scans are performed by an Approved Scanning Vendor (ASV) as designated by the Payment Card Industry Security Standards Council (PCI SSC).

CCCD performs internal vulnerability scans on a periodic (at least semi-annual) basis or after any significant network changes.

Penetration tests must be performed at least once a year and after any significant infrastructure or application upgrade or modification (such as an operating system upgrade, a sub- network added to the environment, or a web server added to the environment). These penetration tests must include both network-layer and application-layer tests.

An annual process is in place to identify threats and vulnerabilities that results in a formal risk assessment.

The results of these tests are available to District IT management.

2.6 Network Time Protocol (NTP)

All critical system clocks and times must be configured to acquire, distribute, and store a consistent time. All CCCD production systems must be configured to use one of the internal NTP servers to maintain time synchronization with other systems in the environment.

Internal NTP servers will be configured to request time updates from the Internet site http://time.nist.gov. Client systems able to retrieve time settings from the NTP server will be limited through Access Control Lists (ACL).

The NTP system will at all times be running the latest available version of the software.

2.7 Payment Card Industry (PCI) Requirements

The following additional network controls are specific to network locations in-scope for PCI:

- Restrict inbound and outbound traffic to that which is necessary for the cardholder data environment.
- Firewall and router configurations must restrict connections between untrusted networks and any system components 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.
- Prohibit direct public access between the Internet and any system component in the cardholder data environment. Do not allow any direct connections inbound or outbound for traffic between the Internet and the cardholder data environment
- Implement a DMZ to limit inbound traffic to only system components that provide authorized publicly accessible services, protocols, and ports. Limit inbound Internet traffic to IP addresses within the DMZ.
- Install a firewall at each Internet connection and between any demilitarized zone (DMZ) and the internal network zone
    - Do not allow internal addresses to pass from the Internet into the DMZ.
    - Do not allow unauthorized outbound traffic from the cardholder data environment to the Internet.
- Implement stateful inspection, also known as dynamic packet filtering. (That is, only "established" connections are allowed into the network.)
- Place system components that store cardholder data (such as a database) in an internal network zone,
- Where feasible, implement only one primary function per server to prevent functions that require different security levels from co-existing on the same server. (For example, web servers, database servers, and DNS should be implemented on separate servers.)
- Use intrusion-detection systems, and/or intrusion-prevention systems to monitor all traffic at the perimeter of the cardholder data environment as well as at critical points inside of the cardholder data environment, and alert personnel to suspected compromises.
- Never send unprotected PANs by end-user messaging technologies (for example, e-mail, instant messaging, chat, etc.).

DIT 08 – Physical Security

1.0 Purpose and Scope

All Coast Community College District (CCCD) information systems must be properly protected from potential physical and environmental threats to ensure the confidentiality, integrity, and availability of the data contained within. This ITSS describes physical access methods, visitors, data center security and media disposal.

This is one of a series of information security Information Technology Security Standards maintained by the District Information Technology (DIT) department designed to protect CCCD information systems.

2.0 Physical Security

All CCCD technology locations will employ security control measures to prevent unauthorized physical access, damage, or interference to the premises and information.

2.1 Physical Security Responsibilities

The Campus Police Departments manage perimeter security for the colleges and District offices. This group has physical keys to buildings and a master badge allowing access to all facilities.

District IT is responsible for all data centers in the District: District Office and Orange Coast College in Costa Mesa, Golden West College in Huntington Beach, and Coastline Community College in Fountain Valley. Card access to the District IT-specific doors and data centers are administered by District IT.

2.2 Access Cards and Visitors to CCCD Data Centers

District IT offices and secure areas are protected by entry controls designed to allow only authorized personnel to obtain building access. Authorized individuals may be issued an Employee, Temporary, or Visitor badge that enables electronic access to exterior doors and authorized internal doors. Additional authorization may be required for access to some doors.

Employees and visitors to CCCD District IT facilities must clearly display ID badges at all times. Employees must be alert for unknown persons without badges, or employees not displaying badges.

District IT visitors must be provided with a badge or keycard that expires and identifies the person as a non-employee. Visitors must sign in and out daily, and be escorted by CCCD personnel. Visitors may be required to surrender badges after leaving the facility or at the date of expiration.

2.3 Data Center Access

The District IT and College data centers are critical processing facilities that must be protected by defined security perimeters with appropriate security access controls.

All persons who do not have a badge that require access to the data center must be escorted by an employee whose badge is authorized to access the data center. Approval is required from the District IT and/or College management prior to any access to this area.

An authorized District IT employee is responsible for making sure that visitors entering a CCCD data center are properly logged. It is mandatory that all visitors check in with District IT reception or College Technology Departments, and visitors to a CCCD data center must sign in and sign out with District IT and/or College IT reception so that the entry and purpose of the visit can be tracked for auditing and security purposes.

For data center visitors, the reception log must note the Name, Date, Company, Purpose of Visit, any escorting employee, and both sign-in and sign-out times. Spot checks of the log may be performed by District IT and/or College IT and matched against the audit trail of door accesses from the keycard badging system. Reception area visitor logs must be retained for three months.

For audit and compliance purposes, the District IT Management will review those authorized to access a CCCD data center at least quarterly to ensure that privileges of employees or vendors who no longer need access to the data center have been removed. Records of these reviews will be maintained for audit purposes.

2.4 Equipment Maintenance and Environmentals

District IT and College IT must ensure that all utilities (e.g. UPS, generator) and other equipment is monitored in accordance with manufacturer specifications and correctly maintained to ensure the availability, integrity and confidentiality of information contained within it.

The data center has dry pipe water fire suppression, HVAC units, environmental protection, redundant UPS systems, and exterior backup diesel generator.

Only authorized maintenance personnel are allowed to perform repairs. All repairs or service work must be documented. Documentation records must be maintained by District IT.

Computer room personnel must be trained in the use of any automatic fire suppression systems, the use of portable fire extinguishers and in the proper response to smoke and fire alarms.

Smoking, drinking and eating in computer processing rooms is prohibited.

2.5 Media Disposal and Destruction

District IT must ensure that electronic information storage devices (e.g., hard drives, tapes, USB sticks, removable hard disks, floppy disks, CD's and DVD's) are disposed of in a manner commensurate with their information classification.

All electronic storage devices must be electronically wiped by a process such that data on the storage device cannot be recovered by individuals and/or technology.

External firms responsible for disposing of any type of CCCD information must be held to any standards specified by contract. This includes confidentiality agreements and adequate security controls.

All Data Owners must ensure that media containing *Restricted* data is destroyed when it is no longer needed for business or legal reasons.

Employees must use proper destruction methods when disposing of CCCD information. Paper copies of sensitive information must be shredded or incinerated. Users of the information are responsible for disposing of it in secure disposal containers or using another proper destruction method.

2.6 Payment Card Industry (PCI) Requirements

The following additional physical security controls are specific to areas that may contain systems or media that are in-scope for credit card data processing or storage:

- Video cameras must be used to monitor individual physical access to areas where credit card data is stored, processed, or transmitted.
- Physical access to publicly accessible network jacks must be restricted. Network ports for visitors should not be enabled unless network access is explicitly authorized by appropriate IT department.
- Physical access to wireless access points, gateways, handheld devices, networking/communications hardware, and telecommunication lines must be restricted to those authorized to work with cardholder data.
- All media containing cardholder data must be physically secured. Media back-ups must be stored in a secure location, preferably an off-site facility, such as an alternate or back-up site, or a commercial storage facility. These locations must be reviewed at least annually.
- Internal or external distribution of any kind of media must be strictly controlled.
    - Media containing cardholder data must be classified so sensitivity of the data can be determined.
    - Secure couriers or other delivery methods that can be accurately tracked must be used.
    - Appropriate IT management must approve any and all media that is moved from a secured area (especially when media is distributed to individuals).
- Storage and accessibility of media must be strictly controlled. Inventory logs of media must be maintained and inventoried at least annually.
- Media containing credit card data must be destroyed when it is no longer needed for business or legal reasons.
    - Shred, incinerate, or pulp hardcopy materials so that cardholder data cannot be reconstructed.
    - Render cardholder data on electronic media unrecoverable so that cardholder data cannot be reconstructed.

DIT 09 – Network Logging & Monitoring

1.0 Purpose and Scope

The objective of this ITSS is to document the requirements for logging and monitoring at Coast Community College District (CCCD). CCCD monitors its IT infrastructure so that potential security incidents can be detected early and dealt with effectively.

This is one of a series of information security Information Technology Security Standards maintained by the District Information Technology (IT) department designed to protect CCCD information systems.

2. 0 Logging and Monitoring

Monitoring helps speed resolution of system problems and aids in the identification of access control policy violations. The monitoring program also verifies correct operation and the overall success or failure of network, server, and application security controls.

2.1 Logging Responsibilities and Tools

The District IT Infrastructure team serves as the primary focal point for network logging and monitoring. The CCCD sites have tools and systems for monitoring network and desktop systems which can also be used by District IT as requested.

Centralized log analysis and event correlation of operating system event logs is performed continuously.

2.2 Basic Logging Requirements

Automated audit trails should reconstruct the following events for all firewalls, routers, database servers, and critical servers, including:

- Alarms generated by network management devices or access control systems
- All actions taken by any individual with administrative privileges
- Changes to the configuration of major operating system network services / utilities / security software
- Anti-virus software alerts
- Access to all audit trails or log records
- Failed or rejected attempts to access *Restricted* data or resources

These events should be tracked by:

- User identification (User ID / account name)
- Type of event
- Date and time stamp
- Success or failure indication
- Name of affected data, system component, or resource

2.3 Log Access and Retention

Access to audit files must be limited to authorized administrators and IT management. Only individuals with a job-related need should be able to view, initialize or create audit files.

Audit files must be kept secure so that they cannot be altered in any way, through file permissions or other means. Precautions must also be taken to prevent files or media containing logs from being overwritten and that sufficient storage capacity is present for logs.

Logs must be kept for the minimum period specified by any business or legal requirements. If no specific requirements exist, logs should be retained for at least one year.

2.4 Log Review Schedule

The following table lists logging checks to be performed on a daily, weekly basis or ongoing/as needed basis.

IT Security Event	Frequency	Responsibility
Alarms generated by network management devices or access control systems	Daily	District IT Management
All actions taken by any individual with administrative privileges	Daily	District IT Management
Anti-virus software alerts	Daily	District IT Management
Access to all audit trails	Daily	District IT Management
Failed or rejected attempts to access *Restricted* data or resources	Daily	District IT Management
Changes to the configuration of major operating system network services / utilities / security software	Weekly or as required	District IT Management
Application logs (e.g., SIS)	As required	District IT Management

2.5 Payment Card Industry (PCI) Requirements

The following additional network controls are specific to network locations in-scope for PCI:

- Use file-integrity monitoring or change-detection software on logs to ensure that existing log data cannot be changed without generating alerts (although new data being added should not cause an alert).

- Review logs for all system components at least daily. Log reviews must include those servers that perform security functions like intrusion-detection system (IDS) and authentication, authorization, and accounting servers.
- Retain audit trail history for at least one year, with a minimum of three months immediately available for analysis (for example, online, archived, or restorable from back-up).

DIT 10 – Remote Access

1.0 Purpose and Scope

The objective of this ITSS is to control access to Coast Community College District (CCCD) information and systems when connections are made to those systems from a remote location.

This is one of a series of information security Information Technology Security Standards maintained by the District Information Technology (IT) department designed to protect CCCD information systems.

2.0 Remote Access

All connections into and out of the internal network must be documented and managed by District IT. Remote access is not automatically provided to all personnel and must be requested and approved as described below. The exception to this is access to the Student Information System (SIS) through the MyCoast Portal using an Internet browser. Access to the Portal is authorized for both staff and students, based on their job function and role, using assigned credentials and passwords.

Users must use established remote access mechanisms or gateways to District systems. Aside from the web-based MyCoast Portal, two primary approved connection methods are used to gain access to CCCD systems: an SSL VPN client (supplied by District IT) or the "GoToMyPC" software.

Remote access is prohibited from any public or shared computer or Internet kiosk.

Users may not establish new remote access systems or methods unless approval has been granted as noted below.

All remote access will be audited annually by District IT management.

2.1 Requests for Remote Access

Users create service desk tickets to request remote access. Refer to the *DIT 03 - Access Control* for further information.

2.2 Approvals for Remote Access

General remote access: For college staff, remote access must be approved by the college President or designee. For District Office staff, remote access must be approved by the Vice Chancellor of Educational Services and Technology or designee.

New remote access methods: District IT must approve any new remote access method or system.

2.3 Access Controls for Remote Connections

Remote access sessions will be automatically disconnected after 15 minutes of inactivity.

Personal firewall software must be installed on all CCCD or employee-owned computers with direct connectivity to the Internet that are used to access a District network. Anti-virus software must also be installed and must include the most recent software updates and virus profiles.

Any remote access connection that has been established for a vendor, business partner, or other third party for purposes of support must be immediately deactivated once no longer in use by the appropriate IT staff.

2.4 Transmission Over Networks

If CCCD *Restricted* data is to be transmitted over any communications network, it must be sent only in encrypted form. Networks include CCCD email mail systems, connections using the Internet, and supplied CCCD remote access systems. All such transmissions must use software encryption approved by the District IT department. Refer to the *DIT 05: Data Classification* for further information.

2.5 Payment Card Industry Considerations

CCCD adheres to the requirements of the Payment Card Industry Data Security Standard (PCI). Where cardholder data is present, remote access to those systems must incorporate two-factor authentication. This refers to network-level access originating from outside the CCCD network to the CCCD network by employees and third parties.

For personnel accessing cardholder data via remote-access technologies, copy, move, and storage of cardholder data onto local hard drives and removable electronic media is prohibited unless explicitly authorized by the Vice Chancellor of Educational Services and Technology

DIT 11 – Security Incident Response

1.0 Purpose and Scope

The purpose of the Security Incident Response ITSS is to provide requirements and procedural steps that will enable a quick and effective recovery from unplanned Coast Community College District (CCCD) security incidents.

This is one of a series of Information Technology Security Standards maintained by the District Information Technology (IT) department designed to protect CCCD information systems.

This Procedure contains:

- Requirements for responding to information security incidents or breaches
- Roles and responsibilities
- Basic procedures needed to respond in a systematic manner

District IT Departmental Procedures exist which contain:

- Security Incident Report template
- Contact information
- Preservation of Evidence
- Breaches of Confidential or Personal Information
- Additional Resources

The primary audience for this ITSS is the Computer Incident Response Team (CIRT), system and network administrators, and those in District and campus or business areas who have been designated to participate in incident response teams.

Depending on the particulars of the incident, steps noted here may be supplemented by additional CCCD procedures, such as those that exist in other documentation, business continuity plans, operational procedures, technical standards, or in other processes and procedures fitting the circumstances of the incident.

2.0 Security Incident Response

Incident response is an expedited reaction to an issue or occurrence either electronic or physical. Those responding must react quickly, minimize damage, minimize service interruptions, and restore resources, all the while attempting to guarantee data integrity, and preserve evidence.

2.1 Incident Response Information Technology Security Standard

Unplanned security events must be reported to the appropriate operational manager and the District-wide IT Service Desk as quickly as possible. A consistent approach to security incident response can minimize the extent and severity of security exposures.

All security incidents must be documented. Where appropriate, security incidents will be reviewed with District IT management. The Security Incident Report template is used for this purpose.

The process for handling security incidents has the following phases:

- Immediate actions
- Investigation
- Resolution
- Recovery and Reporting

The recommended actions for each phase are described in Section 3.

Any directives issued by a member of the CIRT during a response may supersede this document.

2.2. Maintenance

This Security Incident Response ITSS will be reviewed and updated on a bi-annual basis at a minimum, or as relevant personnel, locations, threats or regulatory/contractual requirements change.

The Incident Response plan and procedures should be tested at least annually.

2.3 Roles and Responsibilities

This section defines roles and teams involved in Incident Response process. Procedures and processes these teams may follow are in Section 3 of this document.

2.3.1 Incident Response Coordinator

All security incidents must be reported to District IT through the District-wide IT Service Desk. Where appropriate, District Management or Campus Management will determine who will be the overall Incident Response Coordinator (IRC). The IRC will maintain this Security Incident Response ITSS and Incident Reports and records, and also coordinate tests and any required training.

2.3.2 Computer Incident Response Team (CIRT)

The Computer Incident Response Team (CIRT) will be responsible for handling the overall CCCD response effort. CIRT members represent the IT, Legal, HR, and campus organizations. CIRT members who are CCCD managers may assign others to work on specific tasks of the incident response process.

Not all members of the CIRT will be involved in any given incident. All CIRT members must be willing to accept the responsibility that is required of them and to be able to respond to an emergency at any hour.

2.3.3 Business Response Teams

Business Response Teams may be involved in the incident response process when an incident occurs in a CCCD business area. Both primary and secondary contacts have been designated for each business area.

2.3.4 Users

Despite the existence of system and audit logs, computer and network users may be the first to discover a security event or possible breach. As noted in the *DIT 07 Network Security*, end users need to be vigilant for signs of unusual system or application behavior which may indicate a security incident in progress.

All CCCD users are responsible for reporting incidents they detect, which may include virus or malware infections, a system compromise, or other suspected security incidents. Incidents must be reported to the District-wide IT Service Desk.

2.3.5 Managers

CCCD managers must ensure that employees are aware of their monitoring and reporting responsibilities. They are also responsible for reporting all suspected information security incidents to the District-wide IT Service Desk as soon as possible.

2.4 Contact Information

Refer to District IT departmental procedures for designated personnel and contact information for the IRC, CIRT, and Business Response Teams.

3.0 Incident Response Process

The following section describes the procedures that are common to all types of security incidents and the recommended steps for each phase of a security incident. Please refer to Section 3.3 for specific security incident types.

3.1 Documentation and Preservation of Evidence

Evidence of a computer security incident may be required for civil or criminal prosecution or to document the event for insurance reasons. In order to preserve evidence**,** all relevant information collected during the incident must be protected. To maintain the usefulness of possible evidence, CCCD staff must be able to identify each note or piece of evidence and be prepared to explain its meaning and content.

The chain of custody for all evidence must be preserved. Documentation will be required that indicates the date, time, storage location, and sequence of individuals who handled the evidence. There must not be any lapses in time or date. The hand-off of evidence to authorities must also be documented.

3.2 Control of Information

The control of information during a security incident or investigation of a suspected security incident or breach is critical. If people are given incorrect information, or unauthorized persons are given access to information, there can be undesirable side effects, for example, if the news media is involved.

No CCCD staff member, except the Vice Chancellor of Educational Services and Technology or his/her designate(s) has the authority to discuss any security incident with any person outside of the District. If

there is evidence of criminal activity, he/she or his/her designates will notify law enforcement and request their assistance in the matter.

The IRC is the main point of contact for all communications (internal or external) to reduce the spread of misinformation, rumors, and compromise of the response. All CIRT members should refer requests for information to the IRC, who will work with the Vice Chancellor of Educational Services and Technology and the Public Information Officer (PIO) regarding any communications.

If a hacking incident were to occur, a secure communications mechanism may need to be implemented since the attacker may be monitoring network traffic. All parties must agree on what technology to use to exchange messages. Even the act of two people communicating could indicate to an intruder that they have been detected. Greater care needs to be exercised when an internal person is suspected or could be an accomplice to the compromise.

Incident-specific information is not to be provided to any callers claiming to be involved. This includes but not limited to systems or accounts involved, programs or system names. All requests for information should be documented and forwarded to the Incident Response Coordinator (IRC). Members of the CIRT, working with the IRC, will handle any questions regarding the release of any information pertaining to a security incident. Communication may be from the IRC, a member of the CIRT, or through voicemail or IT bulletins.

If a breach involving personally identifiable or cardholder / credit card information has potentially occurred. The relevant Business Response teams must work with the IT and Legal to determine the specific procedures that should be followed and the nature of notification processes.

The Vice Chancellor of Educational Services and Technology or his/her designates will be the only persons who may authorize contacting external law enforcement agencies should this be necessary.

3.3 Security Incident Categories

Security incidents at CCCD fall into one of the following four categories:

Incident Category	Description	Examples
Internal	Any user (authorized or unauthorized) misusing resources, violating the acceptable use ITSS, or attempting to gain unauthorized access	• Unauthorized use of another's account • Authorized user misusing privileges • Intentionally modifying production data • Inappropriate use of College and District computing resources.
External	Unauthorized person attempting to gain access to systems or cause a	• Denial of service attacks • Mail spamming

	disruption of service	• Malicious code • Hacking / cracking attempts
Technical Vulnerabilities	A weakness in information system hardware, operating systems, applications or security controls	• Compromised passwords • Data that should be protected appears to be available • Data integrity issues
Loss or theft	Loss or theft of CCCD-owned hardware, software; loss or theft of *Restricted* information.	• Lost laptop • Lost smart phone • Lost device or documents containing confidential CCCD data • Airport authority confiscation of CCCD hardware or software • Theft of CCCD hardware or other materials • Breach of student data

3.4 Security Incident Severity Levels

An incident could be any one of the items noted in the "Description" column, and be classified as having a severity level, with corresponding actions to be taken to begin investigation of the incident.

Incident Severity Level	Description	Action required
SEVERE / URGENT	• Successful hacking or denial of service attack • Confirmed breach of personally identifiable (PI) information • Significant operations impact • Significant risk of negative financial or public relations impact	**1. Activate CIRT team and notify the IRC.** **2. Notify all necessary management team members** **3. If a breach of PI or regulated information is suspected**
HIGH	• Hacking or denial of service attack attempted with limited impact on operations • Widespread instances of a new computer virus not handled by anti-virus software • Possible breach of student information or PI	**1. Notify Incident Response Coordinator, who will notify CIRT team members as necessary.** **2. If a breach of Confidential information is suspected**

	• Some risk of negative financial or public relations impact	
MEDIUM	• Hacking or denial of service attacks attempted with no impact on operations • Widespread computer viruses easily handled by anti-virus software • Lost laptop / smart phone, but no data compromised	**1. Notify Incident Response Coordinator, who will notify CIRT team members if necessary.**
LOW	• **Password compromises – single user** • **Unauthorized access attempts** • **Account sharing** • **Account lockouts**	**1. Notify Incident Response Coordinator.**

3.5 Security Incident Phases

The process for handling all CCCD security incidents has four general phases:

1. Immediate actions
2. Investigation
3. Resolution
4. Recovery and Reporting

3.5.1 Immediate Actions

The first actions to be taken are to make an initial identification of the category of incident occurring (Internal, External, Technical Vulnerabilities, Loss or Theft) as described in the table above, and notify the District-wide IT Service Desk.

The CCCD *DIT 02: Acceptable Use* directs users to notify the District-wide IT Service Desk immediately upon identifying a security incident of any type. As a rule, users should also notify their immediate manager to inform them of the incident. The District-wide IT Service Desk will then notify the appropriate response teams to begin investigation and resolution phases.

Response to an incident must be decisive and be executed quickly. Reacting quickly will minimize the impact of resource unavailability and the potential damage caused by system compromise or a data breach.

3.5.2 Investigation

Once reported to the District-wide IT Service Desk, a determination will be made as to the Severity Level (Severe / Urgent, High, Medium, or Low) of the incident based on initial reports.

The Vice Chancellor of Educational Services and Technology Services or their designate (designate may include college management) has the authority to declare a *Severity* level incident and activate the CIRT.

Upon declaration of a security incident, the following actions may also occur depending on the severity and nature of the incident:

- Notification of executive management team members / campus Security
- Notification of District IT Management
- Notification of any outside service providers
- Notification of Business Response Teams impacted by the security event
- Initiation of a public relations response plan or development of emergency communications
- Notification of business partners and others who may be impacted by the security event
- Implementation of incident response actions for the containment and resolution of the situation needed to return to normal operations

3.5.3 Resolution

CCCD's immediate objective after an incident has been reported and preliminary investigation has occurred is to limit its scope and magnitude as quickly as possible.

3.5.4 Recovery and Reporting

After containing the damage and performing initial resolution steps, the next priority is to begin recovery steps and make necessary changes to remove the cause of the incident. Reports and evidence must also be organized and retained.

A process to modify and evolve the incident response plan according to lessons learned and to incorporate industry developments will be managed by District IT.

3.6 Incident Response Contact Matrix

The following table describes common incidents and the primary reporting contact for each. The Primary contact will be responsible for assigning an IRC.

Category	User Group	Primary Contact
Internal, External, Loss or Theft	Students	Vice President of Student Services
Technical Vulnerability	Students	Vice President Student Services, District Director IT
Internal, External, Loss or Theft	Faculty	Vice President of Instruction
Technical Vulnerability	Faculty	Vice President of Instruction, District Director IT
Internal, External, Loss or Theft	Staff	Vice-Chancellor of Human Resources
Technical Vulnerability	Staff	Vice-Chancellor of Human Resources, District Director IT

4.0 Glossary / Definitions

Term	Definition
Business Response Teams	Business Response Teams can be activated to enhance CCCD's response to incidents that affect specific business areas. These teams have established designated contacts for handling incidents or security breaches and enhance collaboration between diverse groups.
Computer Incident Response Team (CIRT)	The CIRT will act as the core incident coordination team for severe security incidents or breaches, and is represented by individuals from District IT, and business areas.
Incident Response Coordinator (IRC)	The IRC serves as the primary point of contact for response activities and maintains records of all incidents. This individual has overall responsibility and ownership of the Incident Response process.
Security Breach	Unauthorized release or exposure of information that is confidential, sensitive, or personally identifiable. The definition of a breach and the actions that must be taken can vary based on regulatory or contractual requirements.
Security Incident	A security incident is any adverse event that compromises the confidentiality, availability, or integrity of information. An incident may be noticed or recorded on any system and or network controlled by CCCD or by a service provider acting on behalf of CCCD.

Security Violation	An act that bypasses or contravenes CCCD Information Technology Security Standards, practices, or procedures. A security violation may result in a security incident or breach.

DIT 12 – Disaster Recovery

1.0 Purpose and Scope

The objective of this ITSS is to outline the strategy and basic procedures to enable Coast Community College District (CCCD) to withstand the prolonged unavailability of critical information and systems and provide for the recovery of District Information Technology (IT) services in the event of a disaster.

This is one of a series of information security Information Technology Security Standards maintained by the District Information Technology (IT) department designed to protect CCCD information systems.

2.0 Disaster Recovery

Disaster Recovery (DR) is best described as the plans and activities designed to recover technical infrastructure and restore critical business applications to an acceptable condition. DR is a component of Business Continuity Planning, which is the process of ensuring that essential business functions continue to operate during and after a disaster.

2.1 Disaster Recovery Strategy and Components

This plan is structured around teams, with each team having a set of specific responsibilities.

The CCCD Disaster Recovery strategy is based on the following elements:

- IT infrastructure designed with redundancy and application availability in mind
- The ability to leverage cloud-based or alternate site locations and facilities
- Documented and tested IT Disaster Recovery procedures for each Tier 1 application
- Business Continuity plans as developed by associated business areas

This Information Technology Security Standard describes:

- Disaster declaration
- A priority list of critical applications and services to be recovered
- Key tasks that include responsibilities and assignments for each task
- Departments and individuals who are part of the recovery process

Each critical application that has been identified in this ITSS has its own Disaster Recovery Plan that can be found in the Appendices of this document.

Paper copies of this ITSS and Appendices must be stored at secure and readily accessible off-site locations.

2.2 Business Continuity Plans

The Disaster Recovery Plan for a critical application is a complementary subset of departmental Business Continuity Plans (BCPs). These plans describe the actions to be taken within business areas that rely upon and use those applications.

Copies of BCPs will be documented and maintained by CCCD business units as led and developed by the relevant Business Recovery Coordinator. The IT Disaster Recovery Coordinator will retain master copies of all CCCD BCPs (see 3.3 for description of roles).

Copies of all BCPs must be kept off-site. All plans must be reviewed at least annually and updated for any significant changes.

All relevant CCCD employees must be made aware of the Business Continuity Plan and their own respective roles. Training must be provided to staff with operational business and /or recovery plan execution responsibilities.

Business Continuity Plans must be developed with requirements based on the specific risks associated with the process or system. Business Continuity Plans must include, but are not limited to, the following information:

1. Executive Summary
2. Key Assumptions
3. Identified Recovery Time Objectives (RTO) and Recovery Point Objectives (RPO)
4. Long-term vs. Short-term Outage Considerations
5. Disaster Declaration / Plan Activation Procedures (e.g., communication plan, mobilization plan)
6. Key Contacts / Calling Tree(s)
7. Roles / Responsibilities (e.g., Recovery Teams)
8. Alternate Site / Lodging
9. Asset Inventory
10. Detailed Recovery Procedures
11. Relevant Disaster Recovery Plan
12. Event and recover status reporting to CCCD management, appropriate employees, third parties and business partners.

Sufficient detail must be included so that procedures can be carried out by individuals who do not normally perform these responsibilities.

2.3 Roles and Responsibilities

2.3.1 Disaster Management Team

The Disaster Management Team is responsible for providing overall direction of the data center recovery operations. It ascertains the extent of the damage and activates the recovery organization. Its prime role is to monitor and direct the recovery effort. It has a dual

structure in that its members include Team Leaders of other teams. Responsibilities of the Disaster Management Team include:

- Evaluating the extent of the problem and potential consequences and initiating disaster recovery procedures
- Monitoring recovery operations; managing the Recovery teams and liaising with CCCD management and users as appropriate; notifying senior management of the disaster, recovery progress and problems
- Controlling and recording emergency costs and expenditures; expediting authorization of expenditures by other teams
- Approving the results of audit tests on the applications which are processed at the standby facility shortly after they have been produced
- Declaring that the Disaster Recovery Plan is no longer in effect when critical business systems and application processing are restored at the primary site

The Disaster Management Team Leader is responsible for deciding whether or not the situation warrants the introduction of disaster recovery procedures. If he/she decides that it does, then the organization defined in this section comes into force and, for the duration of the disaster, supersedes any current management structures.

The Disaster Management Team will operate from a Command Center (TBD), or, if that is not possible, at a secondary location TBD.

The team members are:

Vice Chancellor, Educational Services and Technology
District Director, Information Technology
Senior Director, Infrastructure and Systems
Senior Director, User Support and Helpdesk
Senior Director, Applications and Software Development and Maintenance

2.3.2 Recovery Coordinators

There are two coordination roles who will report to the Disaster Management Team:

- A Disaster Recovery Coordinator (*to be appointed*) is the communications focal point for the Disaster Management Team and other Teams, and will coordinate disaster notification, damage control, and problem correction services. The Disaster Recovery Coordinator also maintains the IT Disaster Recovery Plans and offsite copies, and retains master copies of Business Recovery Plans.

- Business Recovery Coordinators (*to be appointed*) will develop and maintain Business Recovery Plans and coordinate recovery efforts and notification in their business areas.

2.3.3 Operations Team

The Operations Team is responsible for the computer environment (Data Center and other vital computer locations) and for performing tasks within those environments. This Team is responsible for restoring computer processing and for performing Data Center activities, including:

- Installing the computer hardware and setting up the latest version of the operating system at the standby facility.
- Arranging for acquisition and/or availability of necessary computer equipment and supplies
- Establishing processing schedule and inform user contacts
- Obtaining all appropriate historical/current data from the offsite storage vendor
- Restoring the most current application systems, software libraries and database environments.
- Coordinating the user groups to aid the recovery of any non-recoverable (i.e., not available on the latest backup) data
- Providing the appropriate management and staffing for the standby data center, help desk and backup library in order to meet the defined level of user requirements.
- Performing backup activities at the standby site.
- Providing ongoing technical support at the standby site.
- Working with the Networks Team to restore local and wide area data communications services to meet the minimum processing requirements.
- Ensuring that all documentation for standards, operations, vital records maintenance, application programs etc. are stored in a secure/safe environment and reassembled at the standby facilities, as appropriate.

2.3.4 Network Team

The Network Team is responsible for all computer networking and communications, to include:

- Evaluating the extent of damage to the voice and data network
- Discussing alternate communications arrangements with telecom service providers, and ordering the voice/data communications services and equipment as required
- Arranging new local and wide area data communications facilities and a communications network that links the standby facility to the critical users
- Establishing the network at the standby site, and installing a minimum voice network to enable identified critical telephone users to link to the public network
- Defining the priorities for restoring the network in the user areas
- Supervising the line and equipment installation for the new network
- Providing necessary network documentation

- Providing ongoing support of the networks at the standby facility
- Re-establishing networks at the primary site when the post-disaster restoration is complete

2.3.5 Facilities Team

The Facilities Team is responsible for the general environment including buildings, services, and environmental issues outside of the Data Center. This team has responsibility for security, health and safety and for replacement building facilities, including:

- In conjunction with the Disaster Management Team, evaluating the damage and identifying equipment which can be salvaged
- Arranging all transport to the standby facility.
- Arranging for all necessary office support services.
- Controlling security at the standby facility and the damaged site. (physical security may need to be increased)
- Working with the Network Team to have lines ready for rapid activation
- As soon as the standby site is occupied, cleaning up the disaster site and securing that site to prevent further damage
- Administering the reconstruction of the original site for recovery and operation
- Supplying information for initiating insurance claims, and ensuring that insurance arrangements are appropriate for the circumstances (i.e., any replacement equipment is immediately covered, etc.)
- Maintaining current configuration schematics of the Data Center (stored off site). This should include:
    - air conditioning
    - power distribution
    - electrical supplies and connections
    - specifications and floor layouts
- Dealing with staff safety and welfare
- Working with Campus police, who will contact local law enforcement if needed

2.3.6 Communications Team

The Communications Team is responsible for obtaining communications directives from the Disaster Management Team, and communicating information during the disaster and restoration phases to employees, suppliers, third parties and students. All information that is to be released must be handled through the Public Information Officer (PIO).

The Communications Team may be made up of the PIO and individuals from Colleges, Marketing, Legal, HR, and business area organizations, as appropriate.

- Liaising with the PIO, Disaster Recovery Coordinator and/or Business Recovery Coordinators to obtain directives on the messages to communicate
- Making statements to local, national and international media
- Informing suppliers and students of any potential delays

- Informing employees of the recovery progress of the schedules using available communications methods
- Ensuring that there is no miscommunications that could damage the image of the company
- Any other public relations requirements

2.4 Update, Testing and Maintenance

This Disaster Recovery plan must be kept up to date. It is the responsibility of the Disaster Recovery Coordinator to ensure that procedures are in place to keep this plan up to date. If, while using this plan, any information is found to be incorrect, missing or unclear, please inform the Disaster Recovery Coordinator so that it may be corrected. It is important that everyone understands their role as described in this plan.

Updated versions of the plan are distributed to the authorized recipients, listed in Section 2.5.

This ITSS and the IT Disaster Recovery Plans as documented in the Appendices must be reviewed by IT and business management at least semi-annually and when significant application or infrastructure changes are made.

Plans must be tested periodically and at least annually, and include realistic simulations involving the business users and District IT staff. The results of DR tests must be documented and reviewed and approved by appropriate management.

2.5 Distribution List

The Disaster Recovery Coordinator is responsible for distributing this plan. Each plan holder, listed in the table below, receives two copies of this plan. One copy is to be kept at the place of work and the other copy at home or other safe and secure offsite location. These copies have an official copy number.

Name	Copy Number	Location
Vice Chancellor, Educational Services and Technology	DR001	Office
District Director, Information Technology	DR002	Office
Senior Director, Infrastructure	DR003	Office
Senior Director, User Support	DR004	Office
Senior Director, Applications	DR001B	Office

	DR002B	Offsite
	DR003B	Offsite
	DR004B	Offsite
	DR005B	Offsite

3.0 What To Do In The Event Of A Disaster

The most critical and complex part of disaster response is mobilizing the required personnel in an efficient manner during the invocation of the plan. Because normal processes have been disrupted, individuals are taking on new roles and responsibilities and must adapt to changing circumstances quickly.

The key is for personnel to be well-rehearsed, familiar with the Disaster Recovery Plan, and be sure of their assignments.

3.1 Standard Emergency Plan

The first priority in a disaster situation is to ensure safe evacuation of all personnel.

In the event of a major physical disruption, standard emergency procedures must be followed. This means immediately:

- Activating the standard alarm procedures for that section of the building to ensure that emergency authorities (fire, medical, law enforcement, etc.) are correctly alerted

- If necessary, evacuating the premises following the established evacuation procedures and assemble outside at the designated location, if it is safe to do so.

3.2. First Steps for the Recovery Teams

Action	Team
Evaluate the damage	Disaster Management, Facilities, Operations, Network
Identify the concerned applications	Disaster Management, Operations, Network
Request the appropriate resources for the Standby Facility	Disaster Management
Obtain the appropriate backups	Operations
Restart the appropriate applications at the Standby Facility	Operations

Inform users of the new procedures	Communications
Order replacement equipment to replace the damaged computers / networks	Operations, Network
Install replacement equipment and restart the applications	Operations, Network
Inform users of normal operations	Communications

3.3 The Next Steps

- The Disaster Management Team Leader decides whether to declare a disaster and activate the Disaster Recovery Plan, and which recovery scenario will be followed.
- The Recovery Teams then follow the defined recovery activities and act within the responsibilities of each team, as defined in this Disaster Recovery Plan and those defined for the critical applications outlined in the District IT Business Continuity Departmental Procedures.

3.4 Critical Business Applications / Services

The following business applications are considered critical to CCCD's business:

- Tier 1 application (Student Information System)
- Tier 1 application (Financial System)

District IT departmental procedures exist to address the DR procedures for these services.

3.5 Disaster Declaration

In the event of a serious system disruption, the Disaster Management Team will determine the level of response based on the disaster classification categories below. This determination will be made within four (4) hours of the occurrence.

The classification level should be reviewed every 12 hours and re-classification of the disaster will be made as needed until recovery is complete.

Disasters at CCCD fall into one of the following four levels.

Disaster Classification	Description
Level 1 (Low)	**Sub-system Outage / Minor Damage** Partial loss of a component of a critical application for a period of one day to one week. This type of outage does not result in the total loss of operation for that application; however specific functionality is reduced or impaired. In this scenario, only a part of the computer processing environment is impacted, but the communication lines and network are still up and running. The building is still available and the users can use normal office space to wait for the restart of server or application processing. The goal of the recovery process in this case is to restore server or application functionality.
Level 2 (Medium)	**Short Term Outage** Complete loss of a critical application for a period of one day to one week. The ability to meet business functions and mission objectives may be impacted, usually by elongated processing cycles and missed deadlines, but not to a significant extent. In this scenario, a key computer processing application is unavailable. Communication lines or portions of the network may be down. The goal of the recovery process is to restore minimum critical application functionality, which may require moving affected applications to alternate equipment. An alternate site may need to be put on Standby.
Level 3 (High)	**Long Term Outage** Complete loss of a critical application for a period greater than one week but less than two weeks. The ability to continue the business function and its mission is in jeopardy and may fail in some circumstances, such as missing critical milestones in the business cycle.

	In this scenario, key portions of the computer processing environment are unavailable. Communication lines or portions of the network may also be down. The goal of the recovery process is to restore minimum critical application functionality either at the primary facility or at the Standby facility.
Level 4 (Critical)	**Total System Disaster** Catastrophic loss of operation of critical system(s) for a period greater than two weeks. Also included in this class are disasters that may not produce outages greater than two weeks, but involve more than one critical application; or natural disasters such as fires, floods, or other catastrophic situations. In this scenario, the entire computer processing environment has experienced a catastrophic disaster and is generally unavailable. Communication lines and/or the network also may not be available. The goal of the recovery process is to restore minimum critical application functionality either at the primary or at the Standby facility as quickly as possible. If time frames for repairs are not acceptable (e.g., will take longer than 1-2 months), an interim or new production facility may need to be acquired or leased.