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IT Security Standard:

Software Management

Introduction

This standard defines the steps necessary to implement the Bellevue College policy #5250: "Information Technology (IT) Security", within the context of software purchases, installations, storage, and management by the college, and to assure the integrity and reliability of the Bellevue College internal networks, the computers on those networks, and the software installed on those computers. The standard will be reviewed on an annual basis or when changes are implemented.

Scope

This standard defines the processes and controls related to the acquisition, distribution, and installation of computer software on the computing systems at Bellevue College. It is expected any deviations from this standard for either business necessity or platform implementation constraints will be appropriately documented with the Bellevue College IT Security Administrator.

Exceptions

A variety of exceptions to this standard may be expected. These exceptions, when granted, will be documented in either a platform specific standard or in a memo documenting the exception. Exceptions may be granted by the Bellevue College IT Security Administrator, the Dean of Information Resources, or any IR director authorized by the Dean. Copies of all documentation regarding exceptions will be kept on file with the Bellevue College IT Security Administrator. This documentation will include:

1. A detailed description of the exception.
2. A description of why the exception is necessary.
3. A risk assessment by the Bellevue College IT Security Administrator and/or the Dean of Information Resources (IR), or designee.
4. A description of the compensating controls that are in place to mitigate risk created by the exception.

Business Impact and Risk, Threat and Vulnerability Analysis

The sheer number of applications used as part of the installed software base on campus significantly impacts the risks being addressed by this standard. Standard campus users are generally not expected to have sufficient expertise of the security issues, or issues related to network integrity affected by the installation of unauthorized or malicious software. Centralizing the purchase of software allows Bellevue College to negotiate lower costs with vendors and to track software usage.

A clear policy limiting control of the acquisition and installation of software and its subsequent safe storage is a critical factor in assuring the security of the computing and communications resources under Bellevue College's responsibility. Any misuse of software could put the college instructional and business systems at great risk.

Given the ubiquitous nature of literally hundreds of types of software installed on Bellevue College systems, the most significant threats are:

1. Malicious and/or unauthorized access to data
2. Malicious and/or unauthorized modification of data
3. Accidental modification of data (e.g., while performing support)

4. Theft of equipment or resources
5. Malicious and/or accidental damage to equipment or resources
6. Malicious and/or accidental denial/loss of service

Because of the nature of the asset and the nature of the threat, the risks associated with the acquisition, installation, and management of software can be significant, and loss, misuse or civil liability due to copyright violations could cause significant financial loss to Bellevue College.

Standard

A. Introduction

1. Software used on campus is not “owned” by Bellevue College. Software is distributed by manufacturers in the form of software licenses. Every software manufacturer has different licensing requirements from another, and different software products by the same manufacturer may have different licensing provisions. Additionally, Bellevue College may be making use of business software licenses and/or educational software licenses for the same software, both of which could have significantly different licensing allowances.
2. In order to help employees honor the software manufacturer’s expectations, and to keep the campus in compliance with Bellevue College policy #5100: “Software Licensing Compliance”, and with local, state and federal copyright laws, the following standards have been adopted. Employees will comply with the terms and conditions of all licensing agreements and the provisions of the Copyright Act and other applicable laws. Employees have an individual responsibility for familiarizing themselves with their obligations under this standard and for understanding all license and copyright obligations related to software they are using.
3. Unless otherwise stated, “software” refers to all freeware, shareware, and 3rd-party programs, as well as its common meaning with relation to commercial products.

B. Software License Purchasing

1. Bellevue College will provide a standard set of software tools to its employees. This “standard image” will be the base software installation for all workstations. Any additional software needed will be purchased by organizational units for use by their assigned staff.
2. All requests for purchase and installation of software licenses for use on Bellevue College-owned computers and networking systems require prior approval from the Dean of Information Resources or an authorized designee, and will be processed through Request Center.
 - a. Such requests may be an individual order for a specific user or multiple licenses for a given area.
 - b. This includes all server software used by IR technical support units. IR may negotiate and maintain separate contracts with vendors which provide software and service for any specialized software required for the unit to provide any unique services (such as Vista/WebCT, HP/Lund Performance, Minisoft ODBC, etc.) as authorized by the Dean of Information Resources.
3. IR technical support personnel will ensure the requested software is compatible with the computing systems and network systems for which it is intended.
4. IR will negotiate with vendors the best price possible for the specific application. Lists of vendors will be maintained by IR for this purpose.
5. If possible, requests for the same software by different entities on campus will be combined if it will result in a lower overall cost to Bellevue College. IR may reasonably delay acquisition of individual licenses while negotiating or working to merge such purchases.
6. Bellevue College will negotiate site licenses and open licensing agreements with specific software manufacturers or vendors for software that is prolifically used on campus.
 - a. Written copies of all such agreements will be maintained in the Bellevue College IT Security Administrator’s files or with a designee authorized by the Dean of IR.

7. IR will coordinate the purchase of the software licenses in compliance with the applicable processes and procedures of the Finance Office. All new software purchases will be delivered to IR for processing.
8. IR technical support personnel or authorized designees will install all software license requests for software already available and/or installed on campus—in accordance with the Software Installation section below—as soon as the purchase has been processed.

C. Software Installation

1. General

- a. All software installations and/or upgrades will be done by an authorized IR technical support staff member or authorized designee. IR will not install any software without conclusive proof of a valid license agreement for the requested number of installations or software which is not in compliance with Bellevue College policy #5100: "Software Licensing Compliance".
- b. Except as noted herein, only software for which the original media, a valid proof of purchase by Bellevue College, and an authorized license spelling out the number of copies licensed by Bellevue College are available, will be installed on any Bellevue College computers.
- c. Valid proof of purchase by Bellevue College will include, at minimum: the name of vendor from whom the software was acquired, the name of the institution as the entity to whom the software is licensed, and the specific version and quantity licensed. This proof is generally an invoice, but a mailed or faxed letter on company letterhead containing the required information is sufficient proof of ownership. An e-mail from a vendor is NOT sufficient proof of ownership.
- d. All licenses, proofs of purchase (invoices) and original media for software licensed by Bellevue College will be kept and maintained by IR in a centralized area. Network Server Group (NSG) systems and network administrators may securely store and maintain any specialized software required to provide any unique services if authorized by the Dean of Information Resources.
- e. IR technical support personnel will not support software or computers not owned by Bellevue College and/or not installed by a member of the IR team or authorized designee.
- f. It is not acceptable for a Bellevue College user to copy software from any desktop computer at any time.
- g. It is not acceptable for a Bellevue College user to launch (or otherwise access) software not legally installed on the user's desktop computer.
- h. Software installations on Bellevue College-owned computers that are checked out by employees for use at home will follow this standard. Exceptions may be made by the Dean of Information Resources (for instance, certain distance education instructors may be authorized to do their own installations because of their distance from Bellevue College).

2. Office Installations

- a. IR IT support personnel will schedule a time with the user to install the software. The end user will be notified of the completion of the installation.
- b. Bellevue College employees will be given software documentation related to any new authorized software.
- c. Upon request, individual users will be given copies of the software media for software installed on their workstations.
- d. For the purposes of this standard, software installations onto Bellevue College-owned computers not physically located at Bellevue College facilities will be considered "office installations."
 - i. State technology resources authorized for an employee's home use for official purposes are subject to the same compliance expectations of copyright and licensing as would be

applicable if the employee were located in a Bellevue College facility or other official duty station.

- ii. No employee will use unauthorized copies of software on Bellevue College-owned computers whether the equipment is located at the workplace or in the employee's home.
- iii. If software is to be used off-campus, the copies of the media and documentation will be given to the division licensing the software. The division will create a procedure for "checking-out" division-controlled software to their employees for off-campus use, in compliance with the Bellevue College IT Security Standard addressing the "Use of Bellevue College Resources Off-Campus."

3. Lab/Classroom Installations

- a. Software installed in computer labs and electronic classrooms will be compliant with all aspects of this standard, and with Bellevue College policy #5100: "Software Licensing Compliance", including conclusive proof of a valid license for use.
- b. Requests for software installations for labs and electronic classrooms will only be made by Bellevue College faculty or staff. Faculty will present individual student requests when necessary as a part of their curriculum.
- c. Generally, software installations for labs will be requested of IR at least one quarter in advance of the required use.
- d. Sufficient notice prior to expected use is required for software installations in electronic classrooms.
- e. Shareware software will not be installed in Bellevue College Labs and/or a classroom unless the appropriate number of licenses is purchased in compliance with the manufacturer's licensing agreement and this standard.
- f. Demonstration and/or trial software may be installed in a lab or classroom podium for the purpose of demonstration only, if such installation is compliant with the software licensing agreement. Demonstration software will not be installed on the student computers in a lab; such use would constitute a hands-on, production use of the software.
- g. Students are not permitted to install software on any Bellevue College-owned computer on campus unless such installations are a pre-authorized part of curriculum.

D. Use of Personal Software for Work Purposes

1. Personally-owned software may be installed on Bellevue College-owned computers, provided the software is used to provide educational support to students (classrooms and labs), or for work purposes (office) only.
 - a. Only software personally-owned by Bellevue College employees will be installed on Bellevue College-owned computers; software personally-owned by students will not be installed.
 - b. The software may not be installed if previous installations of the application at any location make the installation at Bellevue College a violation of the software licensing agreement.
 - c. Users must request installation of personally-owned software using the Personal Software Installation Clearance form.
 - d. Liability for licensing violations will remain with any individual user making false statements to Bellevue College IT support personnel in order to have personally-owned software unlawfully installed on Bellevue College-owned computers.
2. All personally-owned software installations will be requested through Request Center and will be done by IR technical support staff or an authorized designee. This is to ensure the software does not conflict with the Bellevue College network or the installed software base.
3. Before the software is installed, the requestor will provide to Information Resources:
 - a. **Valid proof of ownership.** This will be an invoice, packing slip or receipt. This must include, at minimum: the name of vendor from whom the software was acquired, the name of the individual to whom the software is licensed, and the specific version and quantity licensed. A

mailed or faxed letter on company letterhead containing the required information is sufficient proof of ownership. An e-mail from a vendor is NOT sufficient proof of ownership.

- b. **Original Media.** No software will be installed unless IR has received the original media (disk, CD-ROM, DVD, etc.).
 - c. **Software License.** Generally, the license for the software identifying the software license number and nature of authorized installations accompanies the software on its installation media. In some cases, that licensing documentation may be in the form of printed documentation or spelled out in the proof of ownership documentation.
4. Shareware and/or demonstration software will be considered “personal software” for the purposes of this standard unless Bellevue College has appropriately purchased a copy. It will be installed for testing and evaluation purposes only.
- a. This type of software license may not be used in any production capacity unless it has been purchased, and is either Bellevue College-owned as described in this standard, or meets the requirements for proof of ownership for personally-owned software as described above and in Bellevue College policy #5100: “[*Software Licensing Compliance*](#)”.
 - b. This software will only be installed in compliance with this standard by authorized IR technical support personnel or authorized designee.
 - c. This software will be purchased or be removed from any Bellevue College-owned computing resources in a timely manner compliant with the specifications set by the vendor.

5. Textbook Software

- a. Software which accompanies legitimately distributed textbooks, and is licensed to a user by virtue of ownership of that textbook, is considered “personally-owned” software for purposes of this standard. Such “textbook” software will be used in Bellevue College offices, labs or classrooms in a manner compliant with the software’s licensing agreement.
 - i. Adoption and/or ownership of a textbook will be considered sufficient proof-of-ownership of any software accompanying that text. This is a specific exception to the ownership proof requirements for any other software.
 - ii. Any faculty member requiring students to use “textbook” software in Bellevue College labs that requires an installation process to function correctly will request installation of that software.
 - Installations will only be requested by a faculty member who expects to use the software as a part of their curriculum. Students will not request these types of installations simply because there is software accompanying their textbook.
 - If the installed software requires the CD-ROM disk from the textbook to be inserted into the computer to run correctly, faculty members may request as many installations in the labs as they think will be needed to provide sufficient access to their students. The students will provide the disk from their legitimately purchased textbook.
 - If the software from textbook results in a full installation on the lab computer (not requiring the disk to run), and the software license states it can only be installed on one computer, it will not be installed unless sufficient copies of the software is delivered to IR to cover the number of installations requested by the faculty member.
 - Generally, installation requests will be made by faculty one quarter in advance of needed use.
 - iii. Textbook software will sometimes run on its own from the software media without requiring installation. If such use is compliant with the licensing agreement for the software, students may use it freely in the Bellevue College labs, provided they own the textbook and have an original copy of the media.

b. Office Installations

- i. Licenses and the original media for software licensed by an employee and installed on a Bellevue College-owned computer will be kept at Bellevue College in the general vicinity of the computer.
- ii. Copies of the licenses and proof of ownership of personal software will be given to IR for file copies. This is required due to the active scanning of the Bellevue College network and computers for non-compliant software. These records will help prevent the inadvertent deletion of authorized personal software from Bellevue College-owned systems
- iii. IT technical support personnel will not otherwise support software not owned by Bellevue College and/or installed by a member of the IR team or authorized designee.
- iv. All personally-owned software previously approved for installation will be removed from Bellevue College-owned computers immediately if the individual to whom the software is licensed is no longer employed by Bellevue College.

c. Lab/ Classroom Installations

- i. IR will retain a copy of the media, as well as copies of the appropriate purchase and licensing documentation for personally-owned software authorized for installation in a lab or classroom. The original media and documentation will be returned to the software licensee.

E. Removal of Undocumented Software from Bellevue College Computers

1. Information Resources will periodically scan computers to ensure compliance with Bellevue College policy #5100: "Software Licensing Compliance", and with this standard.
2. Software installations not meeting documentation and licensing expectations, or found to be in violation of federal, state or local copyright laws, will be considered "*out-of-compliance*."
 - a. If "*out-of-compliance*" software is causing operational or security problems with the Bellevue College network, the computer upon which the software is installed will immediately be disconnected from the network until the issues can be resolved following the notification requirements described below.
 - b. If installed software identified as being "*out-of-compliance*" isn't causing an immediate security risk to the Bellevue College network:
 - i. The individual responsible for the computer and his/her unit administrator will be notified by Information Resources by e-mail regarding why the software is not authorized.
 - ii. The unit administrator may decide that the license is to be purchased. In this case:
 - Normal purchasing procedures will be followed.
 - The software may remain on the computer pending arrival of the purchased license.
 - iii. If the unit administrator does not want to purchase a new license:
 - The individual will have 10 working days to provide the original purchase and licensing documentation necessary to show authorization and method of use by Bellevue College for the software.
 - If, at the end of ten days, no documentation is provided, a second notification will be sent to the individual and the unit administrator stating they have 5 working days to provide the necessary documentation.
 - If no documentation is provided by the end of the 15th day, the software will be subject to removal by Computing Services.
 - c. Only the Dean of Information Resources, the Director of Computing Services, or the College President or her/his designee may authorize the removal of unauthorized software.
3. If a request is made to service or replace a Bellevue College computer upon which "*out-of-compliance*" software is identified, either:

- a. The computer will be returned to the Bellevue College user and the “*out-of-compliance*” process described above will be followed until the appropriate software documentation is provided, or
- b. The Bellevue College user can give permission to Computing Services staff to remove the software. After approval has been received, the software will be removed with no further permissions required, and the computer service will be completed.

F. Use of Bellevue College-owned Software at Home

1. If software licensing permits, Bellevue College will provide loaner disks of software to Bellevue College employees for installation on personal home computers.
2. Employees are not licensed to use the software at home for personal purposes; any such use will only be for work-related activities. Employees may not use copies of software licensed to Bellevue College on employee-owned computers without prior authorization.
3. The method of obtaining such authorization and the processes, procedures and requirements for this type of software use are identified in the Bellevue College IT Security Standard addressing the “*Use of Bellevue College Resources Off-Campus.*”

G. Use of Bellevue College-owned Computers at Home

1. Under certain circumstances Bellevue College employees will be authorized to take Bellevue College-owned computing systems home for use in fulfilling their official duties.
2. IR technical support staff or an authorized designee will perform the initial installation and configuration of the software.
3. Employees will be required to have administrative approval for this type of use and will be required to fill out and have a Bellevue College Loan of State Owned Equipment to Employees form signed before removing any equipment from campus.
4. All provisions for the use of state-owned equipment identified in Bellevue College policy # 4400: “*Acceptable Use of State Resources*” will apply.
5. All provisions of this standard and Bellevue College policy #5150: “*Acceptable Use of the Bellevue College Network and Bellevue College Data Management Systems*” will apply.
6. The processes, procedures and requirements for this type of equipment use are identified in the Bellevue College IT Security Standard addressing the “*Use of Bellevue College Resources Off-Campus.*”

H. Transfer and Disposal of Computers and Software

1. To ensure that software licenses and copyright laws are not violated when a computer or software is transferred within Bellevue College, or when it is externally disposed of, such transfers and disposals will only be conducted by Information Resources and will follow the procedures identified in the Bellevue College IT security standard addressing “*Technology Purchasing and Logistics.*”

I. Software Storage and Inventory

1. Information Resources has the responsibility for ensuring the centralized storage and inventory of all software media and licenses used at Bellevue College. This includes all of the software used to accomplish both the business and educational missions of Bellevue College.
2. IR will maintain an electronic inventory database of Bellevue College-licensed software and it will be accessible to support personnel. This database will also be used as a registry of personally-owned software installed on Bellevue College-owned resources.
3. IR will maintain, as part of the campus software inventory, all written records pertaining to the purchase, licensing and installation of all software on campus.
4. All software licensing information, software media, and appropriate records will be stored in a manner compliant with the Bellevue College IT Security Standard addressing “*Physical Security.*”

J. Monitoring and Administration

1. Bellevue College IR personnel authorized by the Bellevue College IT Security Administrator, or an authorized designee, will actively scan the Bellevue College network and all Bellevue College-owned computers to ensure compliance with this standard and with Bellevue College policy #5100: "Software Licensing Compliance". This scanning will take place remotely, or by IR support personnel physically present at a workstation.
2. Installed software identified as being out-of-compliance with this standard, with the provisions of Bellevue College policy #5100: "Software Licensing Compliance", or in violation of federal, state, and/or local copyright laws will be removed. Best efforts will be made to contact the responsible user to verify compliance prior to removal of the software, but if the user cannot be contacted within a reasonable time, the software will be removed without notice.
3. Sanctions as defined in Bellevue College policy #5100: "Software Licensing Compliance" and other appropriate Bellevue College policies and procedures will result from the unauthorized installation or use of software licenses by Bellevue College employees or students.

Sanctions

Violations of the provisions of this, or any Bellevue College IT security standard or policy, will be dealt with immediately in the same manner as any violations of Bellevue College policies, and may result in disciplinary review. In such a review, the full range of disciplinary sanctions is available, including:

1. Permanent loss of computer use privileges;
2. Denial of future access to Bellevue College IT resources;
3. Disciplinary action – any disciplinary action will be taken in accordance with appropriate procedures as established by the Vice President of Human Resources (for employees) or the Associate Dean of Student Success (for students);
4. Dismissal from the college; and/or
5. Legal action.

Those users who misuse or abuse any computing or network resource may have their login accounts closed and access to the systems immediately terminated. Some violations of this standard may also constitute a state, local, or federal criminal offense.

Appendix A – References

1. Bellevue College Policy #4400: "*Acceptable Use of State Resources*"
2. Bellevue College Policy #5100: "*Software Licensing Compliance*"
3. Bellevue College Policy #5150: "*Acceptable Use of the Bellevue College Network and Bellevue College Data Management Systems*"
4. Bellevue College Policy #5250: "*Information Technology (IT) Security*"
5. Bellevue College IT Security Standard: *Use of Bellevue College Resources Off-Campus*
6. Bellevue College IT Security Standard: *Physical Security*
7. Bellevue College IT Security Standard: *Media Disposal*
8. Bellevue College IT Security Standard: *Technology Purchasing and Logistics*

Effective Date: July 2003
Date Last Modified: July 10, 2009