

Knowledge Management and Information Technology (KMIT) Health Sciences Center Information Technology Standards for Users

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1.0 Introduction

Information Technology (IT) standards for the Health Sciences Center (HSC) have been developed to ensure the highest level of technical support and provide a more reliable, integrated Knowledge Management and Information Technology (KMIT) environment. The standards have been written in view of published State of New Mexico and UNM IT standards; industry best practices; local, state and federal regulations and peer institution benchmarks for IT services and support.

This document, initially authorized and approved in 1998, will be reviewed and revised annually so that the standards remain relevant and useful. Some sections may be updated more frequently to accommodate technology and regulatory changes.

These standards are developed, reviewed, and approved by the HSC KMIT advisory groups (i.e. KMIT Operations Council, KMIT Advisory Council, KMIT Leadership Council) and the Information Systems (IS) Directors Committee. Standards are created and updated based on feedback to the HSC Help Desks; industry best practices and trends identified by HSC IT staff; and technology surveys, including the biennial IT survey given by the Health Sciences Library and Informatics Center (HSLIC).

2.0 Support Standards

2.1 Help Desk Support

Detailed contact information and descriptions of technical support services for the HSLIC and UNM Hospitals (UNMH) Help Desks can be found on the following pages:

<http://hsc.unm.edu/library/usersupport/>
http://hyper.unm.edu/unmhs_intranet/IT/Index.cfm?nbcid=2.

In general, user support services available through the UNM Computer and Information Resources and Technology (CIRT) unit are also available to HSC campus users. For example, software that is licensed for distribution to UNM faculty, staff and students can be accessed at: <http://www.unm.edu/cirt/swdist/index.html>. For a list of CIRT consulting services, review their web page: <http://www.unm.edu/cirt/cirt4.html>. However, in most cases, HSC users should first contact the HSLIC or UNMH Help Desks in order to be directed to or report problems with CIRT systems.

2.2 Notification of Changes in Levels of System Support

HSC Departments can expect at least 3 months notice of any major changes in system standards or support, i.e. changes in support for operating systems or productivity applications that will require hardware/software upgrades. Prior to publication, all proposed changes will be discussed within KMIT, IS Directors and HSC Departmental Contacts groups to assure appropriate opportunity for feedback from faculty and technical staff.

3.0 Authority

3.1 State of New Mexico IT and UNM CIRT Standards

In general, the HSC will meet or exceed minimum Information Technology Standards defined by the New Mexico Office on Information and Communications Management (OICM) and UNM CIRT.

3.2 HSC Definition of Knowledge Management and Information Technology and Guiding Principles

Knowledge management creates a user-centered environment that ensures easy access to and ethical use of appropriate information resources. Effective policy and training, as well as a ubiquitous, unobtrusive information technology infrastructure are essential to a knowledge management program providing stewardship for the collection, storage, organization, retrieval, archiving, and access to data and information.

Information technology supports knowledge management and includes a variety of devices and the connectivity that links them, in order to enable all forms of communication.

The **Guiding Principles** for fostering the creation of a knowledge management environment to maximize the power of information technologies include the following:

- Data gathering takes place once, accurately, and at the original source. It will be integrated and anticipate future needs.
- Information is available in a timely, useful and intuitive way to those with the need to know.
- The knowledge management environment enriches knowledge-based interactions and decisions, and eliminates all process steps that do not add value.

4.0 Network Management Standards

4.1 Infrastructure and Centralized Services

Core Network Services

CIRT provides UNM with commodity and specialized Internet access. Additionally, CIRT maintains the core network infrastructure that links the HSC network to other UNM and Internet resources.

The HSC Network Management Team supports all HSC campus network equipment in accordance with CIRT standards. The HSC Network Management Team maintains all network equipment, including the core network as well as distribution and access layers. They also oversee the distribution of IP addresses within the .health.unm.edu domain.

Wireless

The HSC currently provides 802.11b wireless access to the UNM network and the Internet in most of its buildings. This access was designed to provide coverage for large conference rooms and open public areas. Future plans include greater penetration into individual office spaces areas throughout all buildings.

At this time the wireless network is for convenience only. Authentication and encryption are not required. At some point in the near future the HSC will standardize to a specific 802.11 version when security is deployed to the wireless networks to ensure enterprise wide compliance with HIPAA security standards for electronic patient information. Once this security is implemented, HSLIC will have the only public wireless access at the HSC.

Building Cabling and Telecommunications (pager, voice mail, telephone)

UNM Telecommunications supports telephone/PBX communication services at the HSC. UNMH IT (the Network Management Team) serves as the initial point of contact for all HSC telecommunications work requests.

The current UNM copper cabling standard is category 5e for data and voice. The 'standard' faceplate includes two data ports and one voice port. Per the UNM IT Master plan, category 6 cabling will be considered for all major new construction.

Centralized Services

CIRT supports the centralized financial, human resource and student systems for all of UNM including the HSC. UNMH has its own centralized financial (Ross Financials) and human resource (Empath) systems, for which its IT division provides technical support.

4.2 Network ID

At UNM the term NetID is used to describe a username/password combination required for authentication to UNM managed secured systems and services. All UNM employees are provided with a UNM NetID. UNM NetID's are used to access: UNM email, UNM ERP applications, UNM's eLibrary, WebCT, UNM Parking Services and UNM portal/web applications. The CIRT Support Center provides support for services accessed using the UNM NetID.

In addition to the UNM NetID, all HSC employees receive a separate HSC NetID. HSC NetIDs are used to access: HSC network file sharing services, GroupWise email, desktop PCs, HSC specific web applications and remote access to HSC restricted library services.

Efforts to synchronize provisioning and maintenance of UNM and HSC NetIDs are under way. The HSC will not support the implementation of new systems that do not use one of these IDs for authentication. More information about NetIDs at UNM can be found at:

<http://hsc.unm.edu/library/usersupport/FAQ/whatisanetid.shtml> .

Directory Services are the core technology behind UNM's NetIDs. In an effort to coordinate the integration of new servers and applications, users should coordinate the introduction of new systems and shared applications with HSLIC or UNMH IT staff to insure support and compatibility with one of the Directory Services technologies supported by UNM (Microsoft's Active Directory, Novell's eDirectory, LDAP).

4.3 Server and Systems Management

In the interest of planned growth, business continuity and efficient use of UNM resources within the HSC campus environment, HSC departments should consult with HSLIC staff prior to all application/file server purchases. The HSC Network Management Team will not provide network connectivity to systems that have not received prior authorization to provide server based services. Systems currently in place are subject to periodic assessment to ensure they are in compliance with industry best practices along with state and federal regulations (e.g. HIPAA). Systems shown to represent a security risk to the institution by not complying with current support standards are subject to remediation by their assigned data owner.

All UNMH server purchases must be made through the Director of PC Systems and Support. This includes any servers needed to support vendor applications at UNMH.

5.0 Security Standards

5.1 Security/Passwords

Each employee is individually responsible for maintaining their passwords in accordance with the UNM and HIPAA mandated HSC password protection policy and procedures. Doing so will help assure the security and integrity of individually identifiable and business critical information. Users of UNMH IT managed systems are required to attend training and sign a confidentiality statement before receiving system access.

5.2 Virus Scanning and Data Backup

All UNM or UNMH desktops and servers connected to campus networks must have current virus scanning installed and actively scanning the appropriate file systems. McAfee VirusScan is the current, centrally managed and site-licensed virus protection software available at no cost for all HSC computers running Windows 2000 or XP Professional. It is therefore strongly recommended that HSC and UNMH users use McAfee's VirusScan unless there is a significant business need to install a different product.

All connections on the network are continuously monitored for malicious activity that is the result of a virus infection or system compromise. Given the criticality of the HSC network, the network connection/port of an infected/compromised machine will be disabled until the issue is addressed and approved for reactivation by one of the HSC Help Desks.

All centralized systems supported by UNMH IT and HSLIC are backed up in accordance with best practices and HIPAA legislation. Individual users in cooperation with systems administrators should develop a regular system and data backup procedure for workstations and departmental servers. Everyone should recognize that they are responsible for data stored on local system drives. Those who maintain mission critical servers and services should use current enterprise class business continuity procedures including: off-site storage, automated media rotation and redundancy. All backup and business continuity procedures should be reviewed annually in reference to the HSC IT Disaster and Contingency Plan Policy which can be found at:

http://hsc.unm.edu/library/kmit/docs/IT%20Disaster%20and%20Contingency%20Plan_V5.pdf

6.0 Electronic Communication Standards

6.1 Email and Calendaring

All HSC Information Technology staff support GroupWise (GW) for faculty, staff and student email and electronic calendaring (along with other GW features). There is no charge to units for installation of the GW client on the desktop. UNM CIRT does not promote a particular e-mail client but provides limited support for Mulberry and UNM Web Mail. They currently support Corporate Time as their calendaring service.

In response to increased concern about the impact of unsolicited mail on employee productivity and HSC email systems, spam filtering software has been installed on the salud.unm.edu gateway. The filter is designed to limit the amount of junk email (spam) distributed to individual GW accounts. Messages from the .edu, .gov and .org domains are not screened. Messages from other domains (.com, .net, etc.) are evaluated and scored according to the message type, route, origin and several other parameters that are known to identify spam. Only messages which accumulate a high score are blocked from the GW system. When a message is blocked, an automated reply to that effect is returned to the sender. The server-based spam filter works automatically, and does not require a specific version of GW.

6.2 Terminal Emulation

The HSLIC and UNMH Help Desks provide full support for SSH ("Secure Shell"), which can be downloaded from the CIRT web site, to provide secure terminal emulation access to mainframe systems. UNMH Help Desk also provides support for LanWorkPlace Pro and SmarTerm. Support for these insecure terminal emulation products is limited and will be diminished over time.

6.3 Video and Internet Conferencing

The HSC offers faculty, students and staff a variety of video conferencing services including: IP multicast/multipoint sessions (e.g. Access Grid and Conference XP), IP point-to-point/H.323 sessions (e.g. Windows Messenger) and secure H.320 sessions through the HSC Center for Telehealth.

Multicast desktop video conferencing/collaboration is encouraged for sessions held on-campus. However, because video conferencing and the associated desktop collaboration features can be bandwidth intensive and present significant client configuration challenges, caution is advised when extending a session to an off-campus, non-HSC managed system.

Given the complexity associated with building dedicated video conferencing/collaboration facilities, all proposals for new video conferencing rooms must be coordinated with UNMH, HSLIC or Telehealth program staff. Existing facilities are available to support multipoint or leased line conferences to external sites, but a fee-for-service charge will be incurred to cover technician time needed to setup and facilitate the session.

6.3 Instant Messaging

Currently, the HSLIC and UNMH Help Desks provide limited support for Windows Messenger and GroupWise Instant Messaging. Any department wishing to use this technology should work with their respective IT support group to facilitate this.

6.4 Web Support

HSLIC IT staff support the following World Wide Web browsers and application development environments:

- Browsers: Internet Explorer 5.5+ is the HSC standard browser and receives full support from both HelpDesks. (KMIT recognizes the value of having a second browser such as Firefox installed on the same PC, but non- IE browsers will not receive the same level of centralized support).
- Web authoring: Microsoft FrontPage and Macromedia DreamWeaver
- Application Development: Macromedia Cold Fusion
- Database development: Microsoft's SQL Server or Oracle (in conjunction with applications written in Macromedia Cold Fusion). Microsoft Access databases are not supported for online applications.
- Online Education: WebCT

6.5 Audio/Video Streaming Media Support

Windows Media server based audio and video streaming services are provided by HSLIC IT staff. The Windows Media streaming formats WMV and WMA have been selected as HSC standards for delivery of on-demand and live streaming media. The HSC will support unicast and multicast (as it becomes more widely available) media streaming. Because of server performance and maintenance considerations, direct web based audio and video located on HSC servers other than the HSC media server either for direct or progressive download in any format is not allowed. All audio and video streaming requests will be structured according to HSC web-presentation guidelines.

The restriction to Windows Media applies only to the serving of audio and video content from HSC servers to users over the web. The restriction does not apply to audio and video content created for distribution by other media like CD and DVD. It also does not apply to the ability of HSC client computers to access content in any of the major streaming media formats. HSC client systems are preconfigured with the software to play Windows Media, QuickTime, and Real Media formatted material.

7.0 Hardware Standards

7.1 Workstations, Printers and Peripherals

HSC Administration believes that standardizing the vendor and configuration of desktop and laptop computers is in the best interest of the institution and that every faculty member should have a workstation which meets minimum standards. These minimum standards can be found at:

<http://hsc.unm.edu/library/usersupport/40NewWorkstations/10MinimumHardware.cfm>.

Currently, the HSLIC and UNMH Help Desks support Windows XP Professional.

Purchasing – UNMH

All UNMH departments must secure IT equipment (including PC's, laptops, tablets, PDA's, printers and scanners) through the UNMH IT department. The normal process is to make an IT Equipment request through the on-line budget tool during the budget cycle. Special requests, not made during the budget

cycle, can be made through the equipment contingency fund during the fiscal year. All contingency requests are made to the Director of PC Systems and Support.

Purchasing – HSC (non-UNMH)

HSC departments using UNM funds to purchase computer equipment should either consult the HSLIC Help Desk or select equipment from supported vendors' websites. The current vendors are: Dell for laptop and desktop computers and Dell or Hewlett Packard for networked printers.

Prior to making new purchasing decisions, the HSLIC Help Desk can obtain quotes from these vendors. They also will attempt to assist departments to plan for upgrading workstations that are below the minimum specifications. If you need consultation regarding upgrade options or sources of external support for non-standard equipment, please contact the HSLIC Help Desk.

In addition, each HSC unit is encouraged to maintain currency of workstations through a planned replacement/upgrade every 3-4 years, with some portion of workstations replaced annually. Some workstations may need to be upgraded more frequently based on special needs.

As an ongoing practice, various strategies will be investigated to provide more flexibility and stability in budgeting, and improve our ability to provide workstation support (e.g., group purchasing, single vendor, leasing, on-site vendor maintenance). One example is the Faculty Workstation Project. This program offers new-model personal computers for faculty and staff at a reduced cost to each HSC department, with the remaining cost subsidized by the HSC Administration. Offered every fall, HSLIC purchases the computers, receive requests from HSC departments, and configures and distributes the workstations.

Tablet PC

The HSLIC Help Desk currently supports the ACER C110 and the Motion M1300 models of tablet PC. Tablet PC support services include imaging, software installation, setup printing, email and network connectivity for approved tablet PC's. No other tablet PC models are supported at this time. Since this technology is still new and rapidly changing, please consult with the HSLIC Help Desk before purchasing.

PDA

The HSLIC and UNMH Help Desks provide limited support for handheld devices which use the Palm operating system (PalmOS) and Microsoft's PocketPC 2003. Specifically, they provide setup assistance for synchronizing basic PDA applications (calendar, contacts etc.) with their desktop counterparts. The Help Desks can also provide recommendations on which model will best suit your needs.

7.2 Emerging Technologies

The HSC provides limited support for a variety of emerging technologies. Contact the HSLIC Help Desk for more information.

8.0 End User Software Standards

8.1 Desktop Productivity Software

Microsoft Office has been selected by CIRT as the UNM standard. With the exception of Outlook, all HSC information technology staff will provide basic troubleshooting support for Microsoft Office. CIRT also provides basic support for Microsoft Office and other desktop software. A detailed list of supported CIRT supported software can be found at: <http://www.unm.edu/cirt/sw/> .

The HSLIC and UNMH Help Desks also encourage the use of utilities (e.g. CD burning software, disk defragmenters, etc.) that are integrated into the Windows XP operating system where ever possible. Both Help Desks provide limited support for these applications.

8.2 Knowledge Management Applications

The following applications are supported throughout the HSC:

- Bibliographic Citation Management: RefWorks, EndNote (HSLIC Help Desk)
- Institutional Virtual Repository: DSpace (HSLIC Help Desk)
- Document Management and Collaboration: Work2gether (HSLIC and UNMH Help Desks)
- Learning Management Systems: WebCT [curricular] (HSLIC Help Desk), _____ [training] (HSLIC and UNMH Help Desks)

HSLIC Library Services provides instruction on these applications to all HSC faculty, staff and students.

9.0 Remote Access

The UNM electronic resources can be accessed remotely by any Internet service provider. The HSC services that can be accessed remotely include:

Proxy Server for Online Resources

University Libraries and HSLIC provide remote access to online resources through the use of a proxy server as licensing permits. This system allows off-campus users with access to servers and services at HSLIC that otherwise could not be accessed outside of the UNM computing environment. Departments who purchase new online resources should contact HSLIC about site-wide licensing and inclusion of these products on the proxy server.

Virtual Office

The HSC offers Novell's Virtual Office as a way to access files remotely. With secure authentication, Virtual Office offers access to shared directories, e-guide, printers, and email just as if users were at the workplace. Virtual Office can be found at: <https://myhsc.health.unm.edu>.

GroupWise Access

GroupWise Web Access is considered to be a supplement to the standard client and not a replacement for it. Links to GroupWise web access can be found in various locations throughout the HSC web site. It does not have the same flexibility as the standard client (e.g. right-click, drag-and-drop, etc.), but it can fulfill many of the same functions by using checkboxes and buttons.

The GroupWise client is also available for users with high speed connections. It may be downloaded via ftp from a link on the Technology Support web site (<http://hsc.unm.edu/library/usersupport/>). By downloading the full version of GroupWise, users may take advantage of the software's full functionality remotely.

Virtual Private Network Access

UNMH operates secure Virtual Private Network (VPN) services for resources that require secure off-site access when necessary for critical work of the Health Sciences Center. Contact the HSLIC or UNMH Help Desk for access.

Medical Record Remote Access

UNMH through its Help Desk offers the ability to remotely access the Cerner Millennium products through a secure Citrix ICA client connection. This access is available for HSC providers.

CIRT offers direct dial-up access for modem users. Information regarding direct-dial up access can be found at http://www.unm.edu/cirt/quickrefs/qr_dialups.html.