

IST Services

IST has approximately 320 staff providing services to support administration, teaching and research. Current services fall into the following categories:

- Core central services available to all Faculties and units
- Services provided to Faculties and units that have integrated their IT with IST. IST supports approximately 65% of the faculty and staff across the university.
- Services provided for a fee. The fee is intended to cover the full cost of the service
- Pass-through services, in which IST either acts as a broker or just provides procurement and asset management services. The institutional CMS, sitecore, for example, is administered by IST on a pass-through basis..

Some services provided by IST may fall into more than one category; in these circumstances IST usually refers to these services as hybrid.

Institutional Software Licenses and Other Contracts

IST is responsible for managing institutional software licenses and service contracts that are associated with enterprise-wide applications and infrastructure. Most of the services associated with these institutional costs fall into the category of core services available to all.

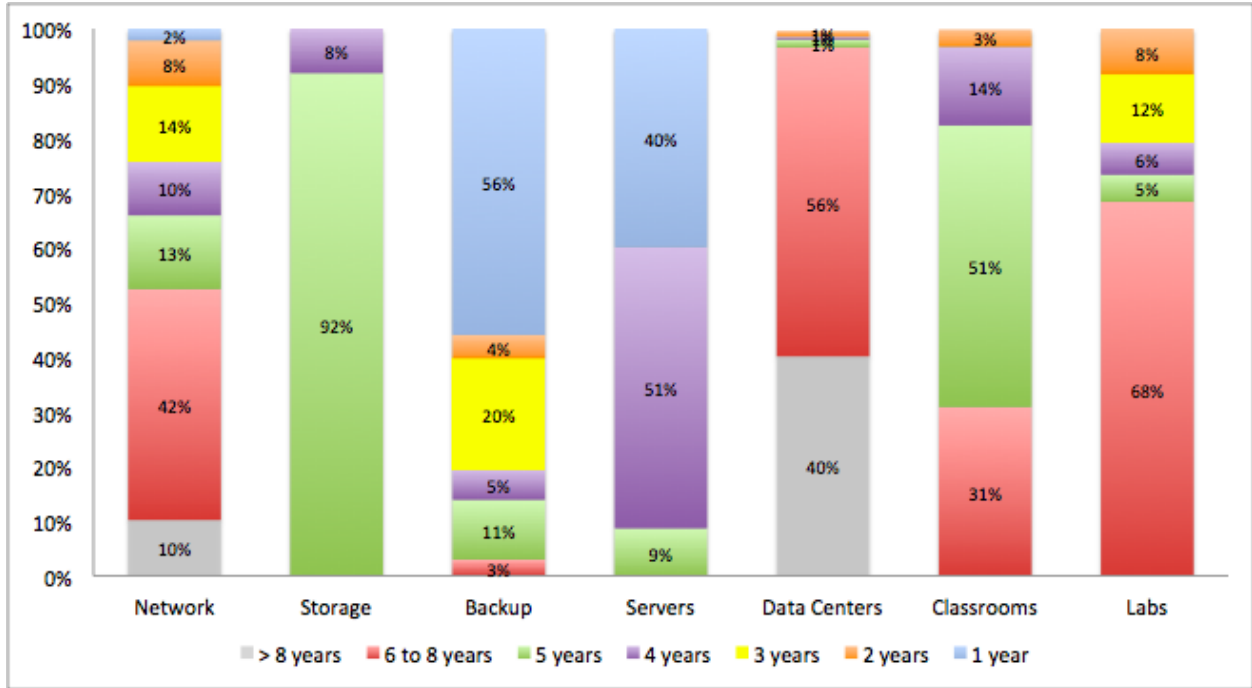
Institutional Infrastructure Maintenance & Renewal

IST is responsible for maintenance and renewal of institutional technical infrastructure including:

- Wired network
- Wireless network, which consists of approximately 5,000 access points
- Three physical data centres, and associated networks
- Intrusion protection and other security infrastructure
- Virtual server environment, which currently consists of 1,840 VM's
- 1,443 Terabytes of backup and storage
- Desktop, server and projection technology in approximately 363 centrally booked classrooms
- 2,469 desktops across 66 public teaching labs
- Over 10,000 desktop telephone sets (60/40 split between PBX/VOIP)

The total funding available is insufficient to maintain all assets on a regular evergreening cycle. IST has therefore developed an evergreening program based on an assessment of risk of failure, rather than asset lifecycle. To further mitigate risk, IST also maintains a contingency fund to address unforeseen failures in any given year. Figure 1 provides an overview of the age of the IT infrastructure by type of asset. More than 50% of the University's IT infrastructure is over five years old.

Figure 1: Breakdown of Age of Infrastructure Assets



APPENDIX A: CORE SERVICES AVAILABLE TO ALL USERS

Service Category	Service Overview
Accounts and Access Management	<ul style="list-style-type: none">• ID administration provides each individual is provided a unique CCID that grants access to many key resources at the University of Alberta based on the individual's relationship to the institution• Identity & Access Management manages electronic identities to ensure the right people can access the right data• Data Sharing Services manages Identity Management Agreements that enable entities to gain access to or share data housed within the University's databases
Google Apps & Email Services	<p>IST supports email, calendar and documents with a number of technologies including applications powered by Google. We assist in configuring and troubleshooting including granting and removing access.</p> <ul style="list-style-type: none">· Active Sync· Google Calendar· Google Chat· Google Contacts· Google Drive· Google Groups· Google Mail· Google Sites· Google Talk/Hangouts· Google+· Mail Forwarding· Mailman· Postmaster· Easypost

Service Category	Service Overview
IT Security	<p>IST is responsible for the following security services:</p> <ul style="list-style-type: none"> · Central Firewall services applies rules to network traffic flowing into, and out of, a protected network areas around the university. These rules may enforce administrative or technical rules about what network traffic is specifically allowed or blocked. · Intrusion Prevention Systems (IPS) are network-based systems that protect users and infrastructure against computer intrusion attempts by analyzing data passing through it and blocking identified attacks. An IPS provides advanced threat detection and mitigation and helps protect campus users from various network based threats. · Cyber Incident Response Team (CIRT) leads cyber incident response and management. The CIRT also supports University of Alberta Protective Services (UAPS) investigations involving computing and network resources. CIRT duties include first responders, containment, investigation, remedy, resumption, and lessons learned to prevent recurrence. CIRT work also includes access to and handling of personally identifying and sensitive information in the course of investigations. · Vulnerability Management Platform identifies university systems and computers at risk and exposed. The system owners/administrators are then alerted to remedy the exposures. The Vulnerability management service assesses institutional systems to identify areas of risk in infrastructure, web applications, and software.
Learning Management Applications	<p>eClass is the University of Alberta’s centrally supported Learning Management System (LMS). It allows instructors to create, manage, and deliver online content, activities, and assessments to students. It provides a platform for the administration and delivery of online course content, communication, assessment, and grades.</p>
Universal Student Ratings of Instruction	<p>Universal Student Ratings of Instruction (USRI) gathers feedback from classes to help instructors, departments and faculties in order to improve curriculum and instruction. We assist in the design, consultation and analysis of the results.</p>

**Public Lab &
Classroom Services**

IST manages instructional spaces across campus where we facilitate hardware and software technology to support teaching and learning.

Service Category	Service Overview
Data Networks	<p>Wired and wireless network services, including network design and architecture, network and security operations, and Internet connectivity. Includes:</p> <ul style="list-style-type: none"> · Campus Area Network (CAN) is a service that carries network traffic between Local Area Networks in campus facilities and data centers. It also provides access to off-campus resources such as the Internet and research networks. · Wireless Network (UWS) provides various connection options depending on the relationship to the University. Users have a choice to access wireless network services at the UofA: an internal network service (UWS) for people with a CCID and a guest/conference network service (Guest@) for people without a CCID. Members of an Eduroam participating institution, you may access the Eduroam service without the need to obtain a guest account, simply login as configured by your home institution. · Data Center Network (DCN) which is a purpose-built network for the support of physical and virtual server infrastructures hosted in the Information Services and Technology data center facilities · DNS / DHCP / IPAM · Off Campus Network Resources is a service involving network connections to services including but not limited to the internet and research networks. These connections support collaboration by sharing our robust network services with other research and educational institutions. Includes connections to Supernet, CANARIE, Cybera, Westgrid and Alberta Health Services · Remote Access and Virtual Private Network provides users with a secure and safe connection to key campus resources while off university premises.
Network Capacity Monitoring	<p>The Network Capacity Monitoring service provides insight and reporting regarding utilization and capacity of network resources. These resources could be network links, load balanced services, or traffic analysis by varying parameters.</p>
Data Center Colocation & Hosting	<p>Physical space to house servers for teaching and research will be provided. This will include power, environmental (HVAC), racking, network connectivity, and physical management of the space.</p>

Service Category	Service Overview
Enterprise Application Services	<p>IST supports applications that are vital to the day-to-day operations at the University of Alberta, current applications include:</p> <ul style="list-style-type: none"> · Ad Astra (Room Booking) · Bear Tracks (Student and Employee Self-Service) · Enterprise Document Record Management System (EDRMS) · PeopleSoft Financials · PeopleSoft Campus Solutions · PeopleSoft Human Capital Management · Oracle User Productivity Kit (UPK) · Research Ethics and Management Online (REMO) · Graduate Studies Management Solution (GSMS) · Telephone Expense Management System (TEMS) · Health Promotion and WorkLife Services (HPaWS) <p>Cost of above applications include the infrastructure support as well as the application support</p>
Enterprise Server Administration	<p>Server Administration on servers used for University-wide services as well as the University of Alberta Central Active Directory environment. Included in the service is monitoring for patches, account management, backup/restoration, file server administration, and Active Directory administration, patching, security, and monitoring.</p>
Enterprise Application Hosting	<p>Enterprise Application Hosting is suitable for campus-wide, high-usage, mission-critical applications.</p>
Enterprise Server & Application Monitoring	<p>Application & Server monitoring provides the most appropriate types of data about the monitored enterprise applications and/or servers empowering service owners to achieve and maintain peak service delivery.</p>
Enterprise Storage & Backup Services	<p>IST provides storage for university data and enterprise applications. Backup Services ensure a copy of the data is maintained.</p>

APPENDIX B: SERVICES PROVIDED TO INTEGRATED UNITS¹

Service Category	Service Overview
Workstation Support	<p>Workstation support may include:</p> <ul style="list-style-type: none"> ● Providing a hard drive image of a standard operating system and supported software (Microsoft Office, Adobe Reader, and antivirus software) ● Operating system updates and troubleshooting ● Purchasing support and configuration of workstation hardware. ● Diagnostics & troubleshooting of hardware issue. Will arrange for repair through third party vendors when necessary. ● Centralized software deployment to workstations when possible. ● Installation, consultation, access, troubleshooting and purchasing support for network and specialty printers.
Department Classroom, Lab & Meeting Room Technology Support	<p>IST manages hardware and software in departmentally owned meeting and instructional spaces.</p>
Virtual Server Hosting	<p>Virtual Server hosting in IST's physically secure, environmentally controlled data center facility. Virtual Machine (VM) servers are available in several instance sizes to suit various needs. Optional services allow for a customizable solution depending on needs and budget and can include low-cost self-managed servers to fully managed servers.</p> <p>In the case where a Virtual Server is not suitable, Physical Server hosting in our managed Data Centers can be accommodated under certain conditions.</p>
Server Administration	<p>Server Administration on servers used for departmental purposes. Included in the service is monitoring for patches, account management, backup/restoration, file server administration, and Active Directory administration, patching, security, and monitoring.</p>

¹ Not all Services are Provided to all Integrated Units. Most units have a subset of this listing depending on assessment at time of integration

Service Category	Service Overview
Application Hosting	A variety of application hosting services are offered in order to accommodate the various business needs of campus. Shared Application Hosting is suitable for applications with a single departmental use that have moderate usage and require a moderate amount of maintenance. These applications need to run on currently supported platforms. Shared Self Managed Hosting is suitable for low usage and very low maintenance applications. Dedicated Application Hosting is suitable for legacy applications or applications with unique technology requirements.
Server & Application Monitoring	Application & Server monitoring provides the most appropriate types of data about the monitored enterprise applications and/or servers empowering service owners to achieve and maintain peak service delivery.
Storage & Backup Services	IST provides storage for departmental data and applications. Backup Services ensure a copy of the data is maintained.
Application Maintenance	For applications that existed at the time of integration IST provides application support (break/fix) along with modifications as necessary to correct faults, to improve performance or other attributes.
Local Area Network	Local Area Network (LAN) provides physical connectivity through a wired computer networking system. We configure networking equipment and provide a range of services from office network port installations to consultations and estimates on construction projects. This network allows us to provide the University community with access to the Internet both wired and wirelessly, Voice over IP (VoIP) phones, and services such as e-mail, applications, shared folders, printers and more.

APPENDIX C: SERVICES PROVIDED FOR A FEE²

Service Category	Service Overview
<p>Business and Project Services</p>	<p>IST Portfolio Management Office provides portfolio management expertise and support in delivering a portfolio of IT and Business Transformation projects. The IT PMO champions proven Project and Program Management, Business Analysis and Organization Change Management practices providing greater visibility, transparency and alignment with the University's strategic goals and initiatives.</p> <p>The IT PMO practices and processes are tailored to the unique needs and culture of the University and are based on the industry standard methodologies.</p>
<p>Application Development & Maintenance</p>	<p>Application Development offers a variety of key services to the university community. We can assist with PaaS Development, Enterprise Application Development, Web Application Development, Mobile Application Development, Consulting Services, QA and Testing, Analytics and Reporting, as well as Visualization Graphics.</p> <p>IST provides ongoing support to these applications which may involve modifications to correct faults, to improve performance or other attributes.</p>
<p>Technical Solution Consulting</p>	<p>Technical Solution Consultations provide consulting services through assessments, recommendations, and solution design to ensure alignment with the University of Alberta's strategic direction for Information Technology. Included features:</p> <ul style="list-style-type: none"> ● Technology Selection ● Implementation Approaches ● Road Mapping ● Assessments
<p>Test Scoring & Questionnaire Services</p>	<p>Test Scoring & Questionnaire Services can be used for test scoring as well a survey data collection. This service uses both optical mark reader (OMR) technology as well as online web surveys. Included features:</p> <ul style="list-style-type: none"> ● Multiple Choice Exams ● Mid Term Evaluations ● Web Surveys ● Questionnaire Services (including data collection)
Service Category	Service Overview

² Services may be provided to an individual, group or entire unit

<p>Audio/Video Production</p>	<p>Audio/Video Production assists in audiovisual equipment rental including recording, editing and web hosting services for both on and off-campus events. This service also offers support in the usage of the equipment and delivers end to end service from the rental of audiovisual equipment to the organization and recording of your event. Included features:</p> <ul style="list-style-type: none"> ● Lecture Capture ● Live Streaming ● Audio Support ● Video Production ● Hosting (Vimeo and YouTube)
<p>AV Installation & Support</p>	<p>We provide the design, integration, programming, installation and maintenance of audio visual systems across campus. We complete a user needs assessment, offer recommendations, procure and install the necessary equipment for your audio visual needs. Included features:</p> <ul style="list-style-type: none"> ● User Needs Assessment ● Building/Room Assessment ● Audio Equipment ● Video Equipment ● A/V System Design ● Projectors and screens ● Control Systems Equipment ● Video Conferencing Equipment ● User training
<p>Video and Web Conferencing</p>	<p>Video and Web Conferencing is involved with scheduling and reserving rooms for your upcoming video or web conference; including the setup of mobile equipment, if required. Included features:</p> <ul style="list-style-type: none"> ● Video Conferencing *requires a dedicated video conferencing room* ● Web Conferencing (Adobe Connect, Google Hangouts)

Service Category	Service Overview
Network Services	<p>IST provides the following network related support and services:</p> <ul style="list-style-type: none"> ● Network design & installation projects (new & upgrades) ● New network ports installation ● Switch installation (new & upgrades) ● Switch configuration ● Virtual LAN configuration ● Uninterruptible Power Supply services
Telecommunications	<p>IST supports both wired and wireless communication solutions. IST assists in purchases, installations, equipment moves, transferring of numbers, installation of applications, repair of devices, and administration of device information, including billing and international calling plans</p>
Virtual Server Hosting	<p>Virtual Server hosting in IST's physically secure, environmentally controlled data center facility. Virtual Machine (VM) servers are available in several instance sizes to suit various needs. Optional services allow for a customizable solution depending on needs and budget and can include low-cost self managed servers to fully managed servers.</p> <p>In the case where a Virtual Server is not suitable, Physical Server hosting in our managed Data Centers can be accommodated under certain conditions.</p>
Server Administration	<p>Server Administration on servers used for departmental purposes. Included in the service is monitoring for patches, account management, backup/restoration, file server administration, and Active Directory administration, patching, security, and monitoring.</p>
Application Hosting	<p>A variety of application hosting services are offered in order to accommodate the various business needs of campus. Shared Application Hosting is suitable for applications with a single departmental use that have moderate usage and require a moderate amount of maintenance. These applications need to run on currently supported platforms. Shared Self Managed Hosting is suitable for low usage and very low maintenance applications. Dedicated Application Hosting is suitable for legacy applications or applications with unique technology requirements.</p>

Service Category	Service Overview
Storage & Backup Services	IST provides storage for data and applications. Backup Services ensure a copy of the data is maintained.
Data Center Colocation & Hosting	Physical space to house servers to will be provided to external parties. The fee will include power, environmentals (HVAC), racking, network connectivity, and physical management of the space.