FHS IT Services: Virtual Server Hosting Services

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EXECUTIVE SUMMARY

The Faculty of Health Sciences has assessed its IT service needs and developed its service offerings and delivery models to ensure effectiveness, avoid duplication and gaps, and take advantage of synergies with IT groups across McMaster. Based on this assessment, models for FHS IT core service offerings were developed and implemented.

Many groups in the FHS require online systems to meet their administrative, education, and research needs. A vital element in these systems is robust and secure servers; specialized networked computers which provide or 'serve' applications to end user computers and mobile devices (clients). No online system, public or private, can exist without a reliable infrastructure and secure, capable servers. The cost for this specialized hardware and its housing can be very high.

Using commercial software (VMWare) to virtualize servers, the Computer Services Unit (CSU) can more effectively leverage hardware resources (i.e., storage space, computing power, memory, network connections, etc.) by sharing these among many servers flexibly and responsively, rather than requiring each group to purchase dedicated hardware. Virtualization also increase efficiency by allowing resources to move where needs exist and avoid wasted idle computing power and capacity.

The Virtual Server Hosting services allow FHS members to access secure virtual servers, hosted and managed by CSU. It maximizes hosting capacity, provides faster setup time, and considerably lowers costs compared to groups purchasing their own hardware.

This document details Virtual Server Hosting Services (VSHS) provided to the FHS via the CSU. The service offering is a hybrid differentiated/core service, having both cost recovery and centrally funded instances depending on purpose and use. It outlines operational procedures, accountabilities, support models, and other key details of the service.

EXPECTED OUTCOMES & BENEFITS

- To realize significant cost savings for FHS service users versus physical server alternatives.
- To provide more rapid deployment of servers than possible with physical server alternatives.
- To enable scalability and flexibility in server configurations to increase efficiency and provide rapid response to user needs.
- To provide a secure, redundant server architecture to protect FHS assets and ensure business continuity.
- To provide increased availability and reliability through leveraging virtual server cloning and other features when developing or performing server updates.
- To provide a turnkey managed solution where hosting, management, security, patching, and application maintenance are managed by CSU, reducing the workload and responsibilities on service users.

SERVICE DETAILS

What are these services?

The Virtual Server Hosting services provide 'virtual' network servers which share common hardware resources and housing for increased efficiency and cost savings. Some examples of these services include:

- Server infrastructure maintenance (repairs, upgrades, expansion)
- Server hosting & maintenance (provisioning, updating)
- Security services
- Data security & backup services
- Datacentre management (environmental control, security, access)

What are the key locations associated with these services?

The FHS datacentres are central to the service and located in the McMaster University Medical Centre (MUMC), rooms 2D11 and 4H16. Other smaller network locations are also included in the service throughout MUMC and MDCL.

Virtual Server Hosting Services will be administered and managed within the FHS CSU within the CSU Infrastructure Management service stream.

Who owns the services & their products?

Most services will be owned by CSU, though ownership of hosted software may vary depending on purpose and sponsor. Third-party partners may share in the ownership of some of the services depending on agreements. Any data stored on or moving across the network will be owned according to laws and policies, not necessarily by CSU.

SERVICE SCOPE

Who are the intended users of the services?

The Virtual Server Hosting service is intended for McMaster Faculty of Health Science members and groups. This service is currently also provided to some arms-length clients (MILO, RMA, PHAC, etc.). As some hosted systems may be public facing, many users external to McMaster and public users are also included in the service offering.

What kind / how many projects will the services support?

The mandate of CSU is to support core technologies within the FHS. Any project that supports the mission of the FHS or its departments is within these services' scope. In all cases, any requested virtual server project will be assessed by CSU, and eligibility to access the service may be denied in cases where the proposed project creates a duplicate service, would create undue risk, or is otherwise determined to not be within scope of the service offering. In cases where the project's eligibility is in question, the FHS Director of IT, CSU management, or the FHS-ITC will provide recommendations regarding eligibility.

SERVICE PROCESSES/PROCEDURES

How do users access these services?
FHS faculty and staff seeking virtual server hosting services must create an online ticket through the MyCSU portal describing their project. CSU will reach out to gather any required information to determine if the request can be accommodated under the service offering

How are the services tracked?
All requests and work efforts are tracked in a ticket tracking helpdesk system. This system handles issue allocation, communications, work tracking and reporting.

How are services terminated?
Service users request termination, and CSU will establish a service end date. The client will have an opportunity to export any data or have it archived (e.g., burned to DVD, provided for download, etc.) before termination. Alternately, the client may elect to export their data according to a mutually agreed-upon schedule. Once complete, the server will be taken offline and deleted.

Who approves access to and continued use of these services?
The FHS-ITC, the FHS Director of IT, CSU management, and service users, may be part of the approval process. CSU will determine the relevant parties during initial consultations and document them in the tracking system.

SERVICE AGREEMENTS & ACCOUNTABILITIES

What are the supported hours of the services?
Most of the services will be available during regular working hours. Due to the availability requirements of hosted systems being as close to 24x7x365 as possible, overtime or irregular hours may often be required. In these cases, CSU will follow standard procedures for approval or cost recovery of time.

How are the servers housed and maintained?
As servers form the backbone of many online services, routine scheduled maintenance is key. CSU will schedule and conduct monthly support days. As service availability may be affected, these will be scheduled off-hours, when possible, to minimize disruptions to service users. Due to the mission-critical nature of the service, CSU has a variety of additional proactive standard operating procedures (SOPs) and support processes that include:

- Constant monitoring of servers and systems
- Security updating for servers
- Daily visual inspections
- Environmental maintenance (Fire suppression systems, Air Conditioning)
- Physical security & access controls

How are client communications handled?

CSU will send broad communication of changes or events, including scheduled maintenance periods, to clients via email. Clients will be responsible for informing their system users. CSU will also share updates on the CSU website.

How are issues prioritized and responded to?

Client requests will be submitted via email or as an online service request ticket. CSU will investigate incidents, assess impact, and provide service according to the associated service definition and agreements. Where possible, CSU's support will be scheduled in coordination with key stakeholders to minimize downtime of resources and maintain business continuity.

What are the client accountabilities associated with the services?

- Providing an accurate representation of needs, data types, and other requirements to provide servers securely and efficiently
- Requesting changes, customizations, service cancellations, etc.
- Requesting maintenance or version upgrades outside of those mandated by CSU processes
- Application maintenance for differentiated servers
- Managing any data on the server appropriately and adhering to the McMaster IT policy framework and acceptable usage policy
- Making payments directly to CSU for all costs associated with use of the service

What are the CSU accountabilities associated with the services?

- Regular maintenance of the datacentres
- Ensuring underlying network connectivity, server infrastructure, and housing for the service
- Maintaining detailed records and project documentation
- Providing clear and responsive communications
- Server provisioning, hosting, maintenance, updating, and management
- Application maintenance for core servers

SERVICE COSTS & PAYMENTS

Are there costs associated with the services?

Costs to the client will vary depending on the request in the case of non-core services. In some cases, clients will be responsible for costs to third parties (e.g., license costs for software hosted on a virtual server). The service will be billed based on the number of virtual servers being used and the resources allocated to them.

How are payments for the services to be made?

Payments to CSU for any cost recovery items must be from a McMaster account via a valid McMaster Chartfield. A valid client Chartfield will be required as part of the scope where any cost recovery elements are anticipated. Any special arrangements outside of this will be at the discretion of the FHS

Director of IT.