Georgia Tech Aerospace Server French building Server Room

Server Room Policy Handbook: Scope, Processes and Procedure
## Version History

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1 INTRODUCTION

1.1 Purpose

The purpose of this document is to define the policies and procedures relating to the operation of Aerospace Engineering Server Room areas.

1.2 Scope

- Security
- Safety measures and procedures.
- Emergency measures and procedures
- Access procedures.
- System hosting facilities.
- Change and configuration management.
- Environmental control, reporting and maintenance.
- Monitoring facilities.

1.3 Definitions

2 SECURITY

2.1 Background

The vulnerability of business critical information systems and the data they contain within the Server Room make the site a high value asset which requires a high degree of protection. A range of security measures are therefore in place to protect employees, information and physical assets, along with the reputation of the University and interested third parties with equipment in the Server Room.

2.2 Entry Systems and Access Policy

Security policy applies to full and part time employees, contractors, vendors, consultants and externally employed people who require Server Room access. Access is controlled via RFID card readers and all doors are fitted with sensors to detect unauthorized or prolonged opening. Staff and visitors must not adjust or otherwise tamper with door fittings. Any suspected faults with doors, lights or any security equipment should be reported to a member of the Server Room staff immediately.

2.3 Shift engineer Contractor Access out of hours

2.4 Webcam surveillance

A webcam with motion sensing monitors and records personnel entering the French server room.
3 SAFETY

3.1 Overview

The French server room can be potentially dangerous as visitors are cautioned to use care when working in the French server room. Floor panels and electrical lines may be exposed or open for operational reasons and visitors and staff should exercise caution when working in the French server room.

3.2 Signs and Information

Safety signs and information are posted at access points to the Server Room. General notices are also posted around the Server Room providing detailed information on first aid, emergency contacts and general Health and Safety issues.

3.3 Contact Information

- **Emergency and out of hours contact details.** Information on emergency and out-of-hours maintenance contacts is posted at all entrances to the Server Room.
- **First Aid contact information.** A list of first aid contacts is posted throughout the Server Room. Help can also be obtained by contacting any member of Server Room staff.
- **Fire safety.** Any fire safety concerns should be raised with a member of Server Room staff who will deal with the matter with the involvement of GT Fire Staff as necessary.

3.4 Health and Safety Considerations

There are a number of Health and Safety considerations when working in the Server Room, namely:

- **Heavy Lifting.** No one should attempt to lift heavy equipment without suitable help. Server Room staff are available to assist when moving heavy items, and suitable transport equipment is provided to assist. Please request help via the Operations Bridge.
- **Working at Height.** No one should attempt to lift equipment in and out of racks unaided. Staff are on hand to move equipment in and out of racks, particularly where height makes the task more dangerous.
- **Lone Working.** Anyone working in the Server Room for prolonged periods should let staff know of their presence. Users are advised to take regular breaks from working to avoid adverse effects from temperature and noise levels in particular.
- **Lasers.** Equipment that includes lasers, such as fiber channel switches, should be clearly identified using appropriate labels. Labels can be obtained from Server Room staff if required. To reduce any risk caps should be placed on laser-emitting devices not in use; otherwise such equipment should be removed all together.
- **Floor Tile removal.** When taking up raised floor tiles, areas must be cordoned off using the flexible safety barriers provided. If work is expected to take a significant period of time then Server Room staff must also be made aware to allow them to inform others.

3.5 Emergency Exits and Fire Alarm Procedures

Two exits are available for emergencies, the main double doors as well as one single door where access is available to electrical transformers that feed the Server room.
3.6 Fire detection and Fire extinguishers

The Server room is fitted with basic fire detection coverage. Fire extinguishers are located at certain points within the room.

3.7 Electrical Safety

Server room users should exercise caution when working with/around electrical circuits. Additionally no users should make modifications or repairs to electrical circuits themselves. If a problem is detected please advise the server room staff.

4 Server ROOM USE

4.1 Hours of Operation

The Server Room operates on a continuous basis, typically there are no staff located onsite but remote monitoring is performed.

4.2 Available Facilities

- Storage. Storage space is at a premium. Storage shelves and racks are provided to hold spares and consumables such as patch leads and power strips. Those with hosted systems should generally consider other locations to keep spares and equipment outside of racks wherever possible.

4.3 Equipment Delivery

At the end of the hall opposite the server room entry doors, goods may be brought through the exterior double doors of the French building by anyone with buzzcard access.

4.4 Environmental Restrictions and Considerations

- Racks. A maximum height of 42u is in place for racks in the Server Room, to ensure adequate clearance between racks and overhead network cable tray work. It also recommended that racks be 800mm wide and 1000mm deep where possible, as this makes internal cabling easier to install and manage.
- Heat load. For hosted systems the cooling capacity of the room is sized for 4Kw of cooling per rack space.

4.5 Control of Equipment and Spares

Equipment left outside racks must be clearly labeled with the name of the owner, a contact telephone number and a date indicating how long it is required. Unlabeled items, or any which exceed their removal date will be removed.

4.6 Console equipment (monitor, keyboard and mouse)

A mobile console marked French Server Room is provided for connection to systems for local working. Any other similar equipment, such as that belonging to and marked French Server room or Aerospace must not be moved or used by others. Anyone having difficulty locating
such equipment should contact staff for assistance.

To avoid blocking aisles after using a mobile console please unplug and return to a storage location next to the wall, between air conditioning units, ready for use by others.

4.7 Prohibited Items

The following items are prohibited from the Server Room:

- Combustible materials such as paper and cardboard (except reference manuals as needed)
- Food and drink
- Tobacco products
- Explosives and weapons
- Hazardous materials
- Alcohol, illegal drugs and other intoxicants
- Electro-magnetic devices that could cause interference with Server and telecom equipment
- Radioactive materials
- Photographic or recording equipment (other than backup media)

5 SYSTEM HOSTING SERVICE

5.1 What the Server Room Provides

The Server Room aims to provide a secure, controlled environment suitable for locating rack-mountable Server systems.

5.2 Accessible Areas

Administrators and owners of hosted systems can access the main entrance with Buzzcard after they have been added to the access list by the Server room staff.

5.3 Equipment Requirements

Equipment allowed in the French server room should conform to the following:

- Rack mountable hardware
- Equipment must be able to operate on 230V
- User will be responsible for cost of wiring from PDU to equipment.
- Minimum processor Quad core.

Advice on power, racking, etc can be obtained at any time from staff.

5.4 Emergency Procedures

See GT standard policies

6 ENVIRONMENT

6.1 Air Conditioning

Under floor air conditioning is provided throughout the room. This delivers up to certain maximum Kw of cooling per rack in accordance with the design specification.
6.3 Power Provision

208VAC power is provided up to the two PDU (Power distribution units). It is the responsibility of the user to provide funding for the final connection between the equipment and the hardware. Please contact the staff for help with configuration for specific systems.
6.4 Networking

Users will be responsible for providing funding for the final run of network wiring (patch cable) between the hardware and the network switches located within the Server room.

6.5 UPS Provision

Anyone wishing to place systems in the Server Room should consider UPS provision requirements. Please consult with Server Room staff before purchasing small UPS units to ensure they can be housed appropriately. All UPS units should be rack mountable with suitable racking kits supplied.

6.6 Environment Control

Cooling controlled via the chill water air conditioning equipment located in the server room. Only members of maintenance staff are allowed to alter settings on any such equipment.

6.7 Environment monitoring

A number of monitors are in place to report on issues affecting the environment. These include:
- Hard wired temperature alarms
- Plant monitoring via the building management system reports on any issues to maintenance.

6.8 Dust prevention

In order to minimize dust generation packing or unpacking of equipment should take place outside the room. Items should be unpacked prior to introduction into the Server room.

6.9 Waste Disposal and Cleaning

Cardboard and other items that can generate dust and are easily combustible should remain outside Server rooms. Waste bins are available in the server room. Larger items should be disposed of immediately at the large roll-off waste container outside the French building.

6.10 Out-of-hours / Emergency Maintenance

AE IT monitors email during off hours on a best effort basis.