
POLICY NAME: Data Center Environmental Controls and Monitoring Policy

Effective Date: April 8, 2009

Policy Owner: Aquia Data Center, TSD

Policy Number: TSD - 1006

Related Policies: Data Center Operational Policy
ITRM Standard SEC501-01

Purpose: The purpose of this policy is to identify the environmental controls and monitoring necessary to safeguard the physical security and operation of critical Information technology (IT) systems and data.

Scope: This policy applies to all environmental controls and monitoring for critical IT systems, equipment, and data housed in the ITU Data Center located in Room 114 of the Aquia building.

Policy Statement: This policy defines the roles and responsibilities of the Information Technology Unit (ITU) and the university community with respect to planning, installing, and maintaining environmental controls in the Aquia Data Center.

Definitions: A power distribution unit (PDU) is a device fitted with multiple outputs designed to distribute electric power, especially to racks of computers and networking equipment located within a data center.

Responsibilities: The Commonwealth of Virginia has published policies and minimum standards to be followed by all state agencies to safeguard the physical facilities that house IT equipment,

systems, services, and personnel. Responsibility for the Data Center and its resources at George Mason University resides with the Vice President for Information Technology. The Information Technology Unit's Data Center group, under the direction of the Vice President for Information Technology, is responsible for setting local standards and policies for the safeguarding of the Data Center facility and assets.

Compliance:

All ITU Data Center staff and associated personnel have a responsibility to comply with this policy.

Any changes, modifications, or revisions to policies related to the governance of the university's Information Technology Infrastructure, Architecture, and Ongoing Operations will be reviewed in light of the latest versions of the standards and guidelines upon which these key components are based. Any changes, modifications, or revisions to systems dependent upon the university's Information Technology Infrastructure, Architecture, and Ongoing Operations will be required to be compatible with the published standards and guidelines.

Implementation Process:

Data Center Environmental Controls and Monitoring Policy shall be carried out and accomplished using the following procedures/instructions:

Data Center Environmental Controls

- Fire Protection Smoke detection & fire suppression system (above raised floor) Pre-ignition dry pipe sprinkler system (above raised floor) Fire extinguishers – inspected regularly by Safety Office
- Flood/Moisture Detection Water sensors under raised floor – alerts staff when moisture is detected
- Temperature Maintenance Temperature and humidity sensors Redundant air handlers – should one fail, backups help maintain proper temperature (air conditioning)
- Power Controls – Auxiliary Power 10 PDUs for proper power distribution Monitoring & collection of hourly data

on total power usage within the data center, reviewed periodically? Main uninterruptable power supply (UPS)
Backup generator dedicated to data center

Monitoring

- The data center operation staff will monitor the data center environment from the main console area using APC's InfrastruXure Central Management and Monitoring solution. The InfrastruXure Central is a fully programmable monitoring system with licenses that can be obtained for system growth. Currently InfrastruXure Central monitors rack temperatures between 65.3 minimum to a maximum 82.5 degrees Fahrenheit, humidity 45.1 minimum to 57.4 maximum. Three 40 foot leak rope sensors running along the left, right and center of the data center's floor detects the presence of water. Additionally monitors are physically connected to all 12 heating, ventilation and air conditioning (HVAC) units, 10 PDU, and the main UPS unit(s).
- Operation staff are required to make physical checks of the data center twice during an 8 hour shift and log or escalate any abnormal conditions.

Serious environmental conditions will be reported immediately to the physical plant for appropriate action and/or repair. Incidents are to be recorded in the daily status log.

Approved By:	Walt Sevon Deputy CIO Executive Director, Technology Systems division
Approval Date:	April 13, 2011
Revision History:	N/A

Supersedes (Previous Policy): N/A

Date of Review: *Reviewed April 12, 2011*

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