

COMPUTING FACILITIES

Computing Facilities: Computing Facilities are rooms dedicated to computing systems. Computing Facilities house systems used for communication, data storage and computations.

Cooling: All facilities and equipment requiring cooling must utilize Campus Central Chilled Water (CCCW) at sites where CCCW is available. A chilled water capacity charge for new or additional capacity may be due and should be part of the initial project budget. In cases where CCCW is not available or deemed to be less cost-effective than another cooling option, the design team must request a variance to the *University of Nebraska at Lincoln* Design Guidelines and provide documentation with details and comparisons of the proposed solution and the CCCW solution. In addition to primary cooling systems that may utilize CCCW, unitary cooling systems not utilizing chilled water may be installed at facilities requiring secondary, emergency cooling systems to ensure reliability and high availability of the computing equipment.

Other Utilities: Availability of other Campus utilities, especially electricity, must be reviewed and will have a significant impact on locating Computing Facilities.

Facilities: Computing Facilities can be categorized as follows:

Communications Equipment Room: A Communications Equipment Room (CER) houses networking and telecommunications equipment and potentially some server equipment. The equipment operates at all times.

Server Room: A Server Room houses a small number of computing servers, a small computing cluster, or data storage machines. Typically, a server room houses one or two racks of computers and ancillary equipment. This equipment may operate at all times or may only be needed for daily work or when research is being conducted. This equipment is typically owned by an individual department or research group.

Data Center: A Data Center is a secure, dedicated area that houses large computing clusters, data storage machines, communications equipment, and/or machines serving research group, departmental, or campus functions. A Data Center can be housed in an existing building or may be a building dedicated solely to the housing and support of computing equipment. These facilities are expected to be operating at all times. Data Centers will be classified in a tiered class system, with requirements for reliability and security in terms of utilities, internet connectivity, and physical attributes. **Security:** All Computing Facilities Equipment Rooms, Server rooms and Data Centers shall have card access control. Wall structures around Communications Equipment rooms, Server Rooms and Data centers shall extend from floor to the structure above.

Fire Protection: All Computing Facilities Equipment Rooms, Server rooms and Data Centers shall have Fire Suppression Systems in accordance with all applicable codes. Data Centers should be equipped with pre-action fire suppression systems to avoid the risk of accidental discharge of water on equipment.