

**Commonwealth Office of Technology (COT)
Standard Process**

Standard Process Number: COT-059

Effective Date: 03/24/2014

Subject: Equipment Installation and Removal at Commonwealth Data Centers

Standard Process Statement: The Commonwealth Office of Technology and the Commonwealth of Kentucky customer agencies, under agreement with COT for Information Technology (IT) Services, shall follow the standard process described below when involved with handling IT Equipment for the Commonwealth.

Purpose: This standard process describes the responsibilities and processes to be followed by COT when installing or removing equipment at the Commonwealth Data Centers. The IT infrastructure supported by COT is expanding and continuously becoming more complex. The Commonwealth Office of Technology is tasked with maintaining infrastructure stability and reliability for the Commonwealth of Kentucky. The purpose of the Equipment Installation and Removal process is to ensure all changes to the infrastructure at the data centers are reviewed and implemented in a rational and predictable manner in order to increase efficiency, minimize the impact of change related incidents upon service quality, and consequently improve day-to-day operations of the organization.

Standard Process Maintenance Responsibility: The Infrastructure Support Branch (ISB) within the Office of Infrastructure Services (OIS) is responsible for maintaining and updating this process.

Audience: This COT Equipment Installation and Removal Process applies to all individuals that install, remove, operate or maintain Information Technology resources located in the commonwealth data centers or maintained by COT.

Unauthorized Change: This process is to regulate and control the installation and removal of IT equipment located in the data centers. All equipment installed or removed from the data centers shall be performed by the COT Infrastructure Support Branch. Each agency, office, division and branch should ensure employees and users under their authority are aware of the provisions of this Standard Process. The Standard Process outlined herein should be followed in both spirit and letter by all parties engaged in equipment installation or removal at the data centers. Failure to do so may result in actions to bring about adherence and/or corrective actions subject to progressive disciplinary steps under applicable state personnel law and Kentucky administrative policies and regulations.

Installation Support Branch Objectives: To ensure that the commonwealth's data centers provide a secure and reliable location for IT equipment and to comply with all Change Management Standard Processes as outlined in [COT-009](#).

To ensure that the equipment installed in the facilities are provided with:

- stable network environment
- proper cooling,
- reliable electrical service,
- use of approved infrastructure materials,
- up-to-date asset information, and
- security

Process:

Equipment Installation:

A. Project Start-Up

A pre-project meeting will be held with the requestor and the Infrastructure Support Branch (ISB) to confirm project objectives.

An e-mail is to be sent to the Customer Service Desk requesting that a ticket be created for equipment to be installed in the Commonwealth Data Center/Alternate Data Center (CDC/ADC).

If the equipment is being installed as a part of a larger project a task is to be added to the change ticket assigned to ISB with a completed [COT-F059](#) Commonwealth Data Center Equipment Installation/Removal Request Form.

- All requests for equipment installation shall have a change ticket associated with it. No equipment will be installed in the data center without prior approval on a change ticket. The approvers shall be the branch manager of the branch requesting the work and the branch manager of the COT Infrastructure Support branch.

B. ISB determines that CDC/ADC can support equipment

The ISB will review electrical, weight, cooling and network connection requirements of the equipment to determine the best solution for the data center to support the requested devices. The electrical capacity and network availability in the data center varies as to location.

C. Physical Location Determined and Equipment Ordered

When the determination is made by the ISB that the data center can support the requested equipment the order for the equipment may be placed by the requestor. Any required patch cables (copper or fiber-optic) must be approved by a member of the ISB prior to ordering. Minimum Category 6 UTP copper patch cords and minimum OM3 fiber patch cords are allowed. **All required patch cables both copper and fiber must be supplied by the customer. The ISB will provide a quotation and assist in verifying the correct cables are ordered.**

After the network and electrical requirements have been determined and the equipment has been ordered the exact location of the equipment will be determined. Availability of network, storage, and electrical connections will be verified and documented by a member of the ISB. **Please note that due to weight, cooling and electrical limitations in some areas of the data center requests for equipment to be located in specific areas may not be accommodated.**

D. Network Operations provides ISB with Switch and Port information, SAN Connection requirements are supplied by the Enterprise UNIX and Storage Branch and/or the Enterprise Windows & Virtual Server Branch

Network Operations will provide the switch port information and the storage team will supply information relating to SAN connections. Other required connection information will be supplied as needed by the requestor. Information is to be supplied on the [COT-F059](#) Commonwealth Data Center Equipment Installation/Removal Request Form.

E. Electrical Required

If electrical circuits are required ISB opens a FM Works request with Finance Facilities. Finance Facilities works with vendors to obtain quotes and manages installation of the required electrical circuits. Typical lead times for installation of circuits are 15 working days from the submission date of the FM Works request. In some instances where large quantities of circuits are requested the lead times may be extended. Expedited installations may be accommodated in emergency situations.

F. Infrastructure Cabling Required.

If Category 6 UTP cabling is required the ISB will either install requested cables or, in the case of large cable counts or expedited requests, may contact the COT Edge Network Operations Branch or outside vendors.

Typical lead times for installation of Category 6 UTP cables are as follows:

- Typical Category 6 UTP cable punched down on patch panel: 1-6 cables: 1 business day.
- Multiple Category 6 UTP cables punched down on patch panel: 7-12 cables: 3 business days.

If fiber-optic cabling is required, the ISB will utilize existing dark fibers where possible. Both single-mode and multimode fiber-optic cables are available in the data center. If new fiber-optic trunks are required the following lead times will be required:

- Typical single or multi-mode fiber optic cable without armor (6 strands or less): 4-6 weeks from time the order is placed with the vendor.
- Typical single or multi-mode fiber optic trunk with armor (all strand counts): 4-6 weeks from time the order is placed with the vendor.

Note: All fiber trunks are special order and are not in stock at vendor's location.

Note: All lead times begin when the ISB is assigned the task through FrontRange.

G. Equipment Installation

After all required cabling and/or electrical infrastructure has been installed, tested and inspected the ISB will receive the equipment either from the vendor, COT personnel or COT Asset Management staff and place it in the appropriate location within the data center. In cases where the vendor is required or contracted to place the equipment on the floor the ISB will be available to assist and/or direct the installation.

Lead time required for installation of the following:

- Server: 1 business day
- Switch: 1 business day
- Equipment Cabinet / Rack: 2 business days after receipt of materials.

Once the equipment is racked or placed on the data center floor the ISB will assist the customer in the connection of the electrical circuits and patch cables as required. It is important to note that the ISB branch does not stock and will not supply required patch cables or electrical cords for the installation.

All required patch cables both copper and fiber must be supplied by the customer. A quotation will be provided by the ISB. If equipment is installed for a POC or loaned equipment and the shipping boxes and packing materials need to be retained, the requestor must indicate that in the change request ticket. Otherwise all packing and shipping materials will be disposed of at the time of installation.

Note: All lead times begin when the ISB is assigned the task through FrontRange.

H. Project Closeout

When all equipment has been racked, or placed, in the data center and all required patch cables and electrical connections have been made, the ISB will update EPPATS with the required information for Asset Management tracking purposes. This task within the FrontRange Ticket is closed.

Equipment Removal:

All requests for equipment removal must be via an approved change request. The [COT-F059 Commonwealth Data Center Equipment Installation/Removal Request Form](#) must be included on the change request.

Approvers on the request shall be the branch manager of the requestor and a member of the ISB. It is the responsibility of the requestor to complete the surplus or e-scrap forms for the equipment. Under no circumstances shall any equipment be removed from the data center without an approved change request ticket.

Prior to removal of equipment it is the responsibility of the requestor to disconnect all network cables and electrical cords. A COT Equipment Removal sticker must be placed on the front of the equipment with the required information. Stickers will be supplied by the ISB.

References:

- COT-009 Change Management Standard Process:
<https://gotsource.ky.gov/docushare/dsweb/Get/Document-136545/>
- COT-F059 CDC Equipment Installation/Removal Request Form:
<https://gotsource.ky.gov/docushare/dsweb/Get/Document-391077/>