

FDA STAFF MANUAL GUIDES, VOLUME III - GENERAL ADMINISTRATION

INFORMATION RESOURCES MANAGEMENT

INFORMATION TECHNOLOGY CONNECTIVITY

SERVER CABLING POLICY

Effective Date: 01/13/2017

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1. PURPOSE

The purpose of the Food and Drug Administration (FDA) Office of Information Management and Technology (OIMT) Server Cabling Policy is to outline the requirements for building and maintaining a standard network and electrical wiring infrastructure in FDA data centers and communications rooms.

2. BACKGROUND

The FDA's IT infrastructure, network, systems, and applications face constant change and maintenance requirements. In order to implement, operate, and maintain highly available data center systems, a standard methodology shall be followed for connecting and documenting storage devices, servers, network assets, and patch panels. This requirement covers network cabling, data network cabling, and electrical cabling.

3. POLICY

To assure efficient and effective management of FDA data center systems, the following requirements must be met.

Note that there may be some legacy standards for the Scientific Data Center (SDC) in the College Park One (Wiley) Building, the White Oak Data Center (WODC), the Ashburn Data Center (ADC), FDA continental U.S. Field Locations, and the National Center for Toxicological Research (NCTR).

A. Goal

Standard network and electrical cable wiring methodology and labeling for all connections shall be followed that allow one to ascertain the end to end pathway and location of any cable within the cable plant.

B. Approved Methods

This documentation can be done in the following ways:

1. Network Cabling and Data Network Cabling

- a. A label will be attached to each cable termination point (no more than 4 inches distance from connector) that lists the row number, rack number, rack unit position, and port number of the other end of the cable.
- b. Configuration data will be provided within the network switch or router that provides the cable termination location for the cable at the port level. This also will indicate the row number, rack number, rack unit position, and port number of the other end of the cable. This applies to both Network and SANs (Storage Area Networks).
- c. Barcode labels will be used, that when scanned and searched in a configuration database, provide the endpoint locations of the cable for the row number, rack number, rack unit position, and port number of the other end of the cable.

2. Electrical Cabling

- a. Power receptacles must contain a label showing the Power Distribution Unit (PDU) number or the Power Panel number and the location of the breaker within that pane using a standardized, easy to follow nomenclature.
- b. Breakers in Power Panels and PDUs will have written documentation located within the panel, or posted within 2 feet of the breakers that indicate the receptacle location using a standardized, easy to follow nomenclature.

All documentation must be updated within 30 days of any changes. The documentation should be kept in the formal repository (e.g., SharePoint, CMDB, etc.) as directed by the Division.

4. RESPONSIBILITIES

A. Division of Infrastructure Operations (DIO)

DIO has overall responsibility for defining the cabling requirements for the FDA data centers. DIO is responsible for ensuring that a comprehensive and effective set of cabling standards exist to facilitate installation and allow ease of connectivity discovery. The authority for this policy extends to all FDA managed data centers and communications rooms.

B. Locally Assigned Data Center Managers (WODC, SDC, ADC, and NCTR) or Points of Contact (POCs)

The respective data center managers have responsibility to ensure that this policy and associated Standard Operating Procedures (SOPs) are reviewed, implemented, and followed by all staff members and contractors involved in infrastructure network cabling and electrical wiring.

C. Implementation and Operational Staff

Staff operating in FDA data centers will use the labeling standards outlined in this policy as the minimum requirement when applying the standards directed by the Data Center Manager for that facility.

5. PROCEDURES

The procedures are outlined in the Standard Operating Procedures (SOPs) referenced in E and F of Section 6. References.

6. REFERENCES

- A. ISO/IEC TR 14763-2-1: International Network Cable Labeling Standard
- B. ANSI/TIA/EIA-606-A Addendum 1: General Cable Plant Labeling Standard
- C. ANSI/TIA-606-B: Data Center Specific Cable Plant Labeling Standard
- D. Installation Configuration Guide Server Hardware Configuration Guide
Doc #: SRVOPS-INS-0012 Version: 2.9 Date: 08-19-2015
- E. 20079 Data Center Electrical Add-Change SOP.doc
- F. OIMT SOP FDA Server Network Cabling.doc

7. EFFECTIVE DATE

The effective date of this guide is January 13, 2017.

8. Document History - SMG 3235.3, Server Cabling Policy

STATUS (I, R, C)	DATE APPROVED	LOCATION OF CHANGE HISTORY	CONTACT	APPROVING OFFICIAL
Initial	01/13/2017	N/a	OO/OIMT/OIM/OTD/ DIO/EIOS/SOBR	FDA Chief Information Officer

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