

Data Center Cleaning Policy

DC Manager: This template provides direction to a professional cleaning vendor for the cleaning of your Data Center. It follows the guidelines presented in Build the Best Data Center Facility for Your Business, by Douglas Alger. Data Center cleaning issues, including the merits of having a Data Center cleaned regularly and what problems to watch out for, are discussed in Chapter 15, “Maintaining a World-Class Environment.”

1.01 Overview

This document outlines the standards for cleaning **Your Company**'s Data Centers.

Work shall be done by qualified vendor personnel who have significant experience in the cleaning of server environments and appropriate training with the materials and operational procedures specified in this document. The vendor will provide proof of insurance and bonding.

Onsite cleaning activities will be overseen by **Your Company**'s Data Center Manager.

1.02 Precleaning Preparation

A meeting and walk-through of the Data Center will be scheduled prior to the cleaning. Attendees are to include the Data Center Manager, a cleaning vendor representative, and the cleaning vendor's work crew supervisor who will be present during the cleaning of the Data Center.

The Data Center Manager will review the Data Center Standards of Operation and designate what building areas workers are authorized to be in. The Data Center Manager will also provide a map that highlights which Data Center electrical outlets are for the vendor's use while cleaning. No other outlets may be used by vendor personnel.

1.03 Standards of Operation

Cleaning vendor personnel are required to observe the Data Center Standards of Operations at all times. At a minimum, this includes:

- No food or drink in the Data Center
- No propping Data Center doors
- No interfering with the operation of Data Center equipment
- No unauthorized/unbadged personnel in the Data Center
- Checking in with the Operations Command Center when vendor personnel start and complete work for the day.

Workers must wear clothing that easily identifies them as members of the cleaning company. During the cleaning of the Data Center, workers are responsible for conducting themselves in such a manner as to protect Data Center equipment and infrastructure and to avoid creating hazards for employees who enter the work area.

Data Center Cleaning Policy

Signage or safety cones should be used to surround open floor tiles, electrical cords strung along the floor, and any areas that are being damp-mopped.

If a problem or accident occurs and the Data Center Manager is not present, vendor personnel will immediately contact the Operations Command Center at (###) ###-####.

1.04 Approved Equipment & Materials

The vendor will use the following approved equipment and supplies:

- Triple-filtration high-efficiency particulate air (HEPA) or S-Class vacuums, capable of removing 99.97 percent of particles 0.3 microns or larger.
- Cleaning chemicals that are pH neutral, static dissipative, and approved or qualified by computer hardware manufacturers. Material Safety Data Sheets must be provided to the Data Center Manager prior to performing work.
- Canned air.
- Lint-free mops that are approved or qualified by computer hardware manufacturers. Mops should have nonmetal handles and sewn ends, to prevent snagging. Mop heads should have looped ends, not ends that are open or stringy or both.
- Lint-free, antistatic wipes and towels that are approved or qualified by computer hardware manufacturers.
- Low-speed floor scrubbing machines.
- Electrical cords that are in good condition and possess appropriate ground configuration.
- A stable stepladder with nonmarking rubber feet.

1.05 Equipment Cleaning Procedures

A HEPA vacuum will be used to clean the horizontal surfaces of all equipment.

Cloths treated with antistatic property chemical will be used to wipe down all external surfaces of all cabinets, polystyrene end-row sheets, servers, networking devices, and storage units. Chemicals will not be sprayed directly onto equipment. Keyboards will not be touched during cleanings.

Cleaning activities should generally progress downward from the Data Center ceiling and outward from the room's air handlers.

The cleaning vendor will begin work in the Data Center by conducting the following tests:

DC Manager: The following three tests are optional, but recommended. The first two procedures are helpful for measuring the effect of the cleaning itself. The final measurement, of temperature and humidity, is unnecessary if your Data Center already possesses the appropriate monitoring devices.

- Measure and record airborne particle counts—both above the floor and below—at locations agreed with the Data Center Manager. These readings are to be saved

Data Center Cleaning Policy

for comparison with measurements taken in the same locations after cleaning is complete.

- Perform a ferrous metal test in three distinct locations in the subfloor.
- Measure and record temperature and humidity conditions at locations agreed upon with the Data Center Manager.

1.06 Above-Ceiling Cleaning Procedures

DC Manager: It is beneficial to clean above the Data Center ceiling if that area is used as a plenum. If it is not, this subsection can likely be removed.

Vacuum the top of the false ceiling tiles, after first pulling them up in a checkerboard pattern to gain access. Vacuum in and around cable bundles, ceiling tile grid, and walls. Do not move cable bundles.

Remove any large debris and place it into the trash.

Make note of any unusual conditions—loose tile brackets, condensation, damaged tiles, and so on—and include them in the final report to the Data Center Manager.

1.07 Below-Ceiling Cleaning Procedures

Vacuum surface dust and particles from the top of all raceways and cable trays that are secured below the room's ceiling.

Make note of any unusual conditions—loose brackets, damaged cable bundles, condensation, and so on—and include them in the final report provided to the Data Center Manager.

1.08 Cleaning of Servers and Networking Devices

Wipe down the external surfaces of all server cabinets, servers, networking devices, and other equipment, using lint-free cloths treated with antistatic chemical. Avoid disturbing patch cords or power cables, touching keyboards, moving hardware, or spraying chemicals directly onto equipment.

Vacuum the horizontal surfaces of equipment. Use canned air to dislodge dust in areas that cannot be reached by the vacuum.

1.09 Floor Surface Cleaning Procedures

When cleaning the raised floor, avoid disturbing any cables that are routed through the notched opening of Data Center floor tiles.

Vacuum surface dust and particles from the top of all accessible portions of the floor, including blank, notched, and perforated floor tiles.

Data Center Cleaning Policy

Treat smudges, stains, black marks, and so on, with an approved solution and scrub with a medium-grade scrub pad. Use an approved floor machine to clean all accessible portions of the floor.

Last, mop the floor with a damp—*not wet*—mop using clean, warm water. Use a two-bucket system, one for mopping and one for rinsing. Change water frequently in both buckets.

Make note of any damaged floor tiles and include their location in the final report provided to the Data Center Manager.

1.10 Subfloor Cleaning Procedures

Starting in one corner of the Data Center, pull up floor tiles in a checkerboard pattern to access the sub-floor. No more than ten percent of the room's tiles should be removed at one time.

Vacuum the subfloor, carefully maneuvering in and around cable bundles, base columns, and walls. Do not move cable bundles or electrical conduits.

Remove any large debris and place in the trash.

Make note of any unusual floor conditions—loose floor pedestals, cracks, condensation, signs of food or drinks, and so on—and include them in the final report provided to the Data Center Manager.

1.11 Postcleaning Procedures

Repeat all tests that were performed before the Data Center was cleaned, as outlined in Section 1.05. Conduct them in the same locations as before, following the same procedures.

A final walkthrough of the Data Center should be performed with the Data Center Manager, cleaning vendor representative, and the cleaning vendor's work crew supervisor who participated in the cleaning.

The vendor will provide a report to within two weeks of the project's completion. It will include a graph of the precleaning and postcleaning particle counts, ferrous metal test, supporting data, and a summary of any unusual Data Center conditions discovered during the cleaning.

1.12 Scheduling

The Data Center is to be cleaned above the floor on a quarterly/an annual basis and below the floor on a quarterly/an annual basis.

Cleanings will be conducted after normal business hours. Specific scheduling of Data Center cleanings will be coordinated with the Data Center Manager.