

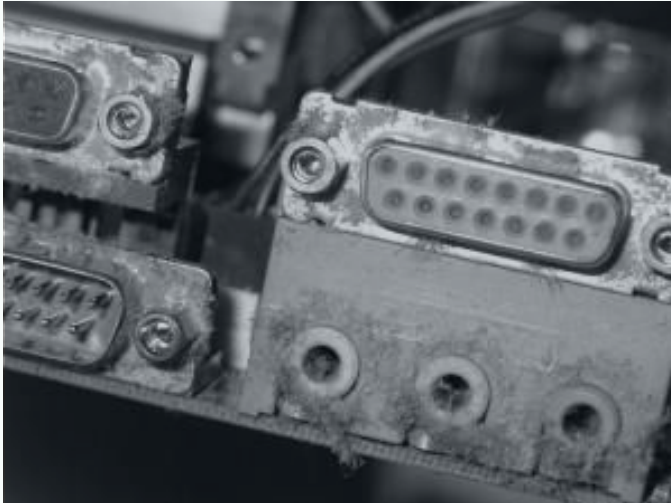
# Guide to Data Center Cleaning

A perspective view of a data center aisle. The floor is made of light-colored square tiles. The ceiling has a grid of recessed lighting fixtures. On both sides, there are rows of white server racks with black doors. The racks are filled with server units. The overall atmosphere is clean, bright, and professional.

# Why cleaning your data center is important

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Experts recommend data center cleaning to improve equipment reliability and prevent downtime



- **Essential maintenance** recommended by hardware manufacturers & ASHRAE
- **Improve reliability** by cleaning & optimizing the environment for servers by minimizing contamination
- **Prevent downtime** by removing contamination build-up through by routine cleaning

# Contamination sources & effects

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Hidden contamination is often overlooked and builds up overtime and can result in downtime



- **Contamination sources** include fine dust, fibers, & ferrous metal that naturally accumulate over time
- **Contaminants are often overlooked** because they're hidden under raised floors & migrate inside servers
- **Contamination builds up** over time in subfloor plenums & inside servers through the cooling systems airflow
- **Effects of contamination** include downtime caused by thermal failure, short circuits, & interconnect interference

# Prevention & control of contamination

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Planned maintenance cleanings can prevent and control contamination buildup to avoid downtime



- **Prevent contamination** by routinely vacuuming & removing harmful contaminants
- **Control contamination** particles from migrating into equipment by preventing buildup in subfloors
- **Avoid downtime** with a routine maintenance program that includes recommended services

# Prevention & control of contamination

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Find vendors that use proper equipment, trained personnel, and follow industry standards

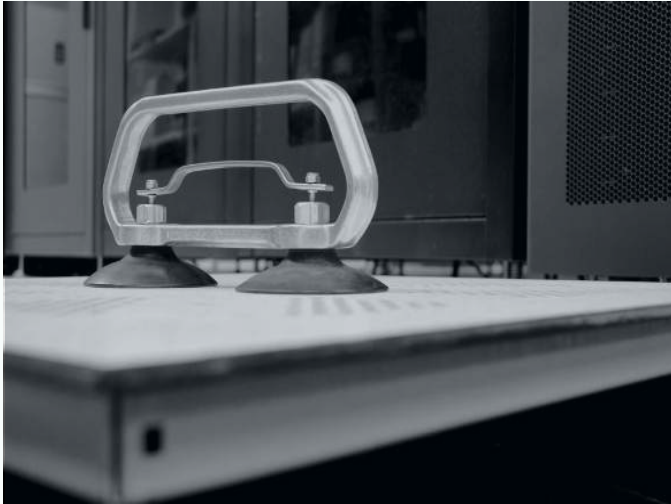


- **Experienced vendors** are focused on data center cleaning & can safely clean your critical areas
- **Proper cleaning equipment** provides the highest capture rates & are safe to operate near servers
- **Trained personnel** understand data centers & use proper cleaning procedures to ensure the highest level of quality
- **Industry standards** include cleaning subfloors, raised floors, equipment, & monitoring airborne contamination

# Industry standards & recommendations

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Experts recommend routine cleaning of the subfloor, raised floor, equipment, and monitoring contamination

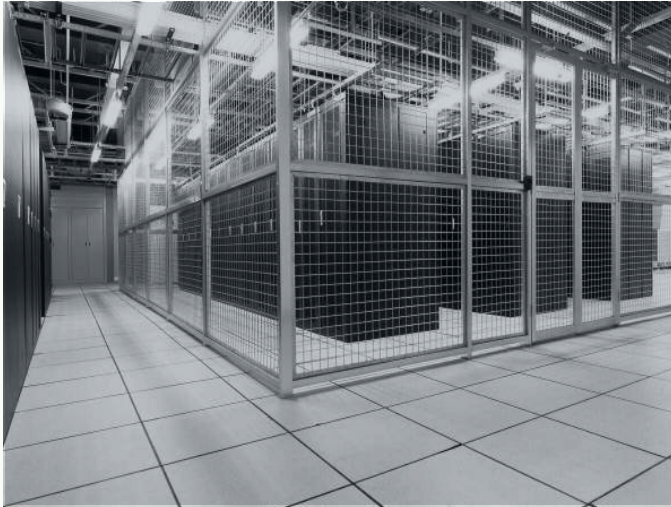


- **Subfloors** should be vacuumed at least once per year because airflow sweeps up built up contamination
- **Raised floors** should be thoroughly cleaned four times per year to restore & prolong their life
- **Equipment** should be vacuumed & wiped clean four times per year to remove contamination
- **Airborne particle counts** should be taken at least once per year, but four times per year is recommended

# What to look for in a vendor

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Use qualified vendors with trained employees that can meet your needs at all your locations



- **Customer references** from data centers that can confirm their experience & quality of work
- **Industry certifications** like ADCCP or an equivalent organization that meets ASHRAE guidelines
- **Proper equipment** is used like ULPA-filtered clean room vacuums to ensure quality & safety
- **Trained employees** that understand your critical areas & are background & drug screened
- **Coverage & scheduling flexibility** that meet your maintenance windows for all your locations

# Case study

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A large data center experienced downtime due to a contamination related event



- **Situation:** unseen contamination generated by misaligned belts in air handlers created fine black airborne dust
- **Issue:** small particles accumulated over time in hidden areas under the floor & in servers
- **Solution:** cleaning to remove contaminants from the subfloor, air handlers, cabinets, & server components
- **Results:** several days of business interruption with hundreds of thousands of dollars in downtime & mitigation costs



# Case study

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25+ years of experience helping facility managers improve and protect their data centers



- **25+ years of industry experience** cleaning data centers & certified by ADCCP
- **Trained regional crews** with consistent pricing & discounts for multiple sites across the US
- **Best-in-class equipment** like ULPA-filtered clean room vacs with shielded motor housings
- **Complete service offering** including data center cleaning, disinfection control, & daily janitorial services



# Contact Information

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Contact us to discuss a data center cleaning maintenance plan

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