

A photograph of two men in a server room. The man on the left is wearing a grey sweater and light blue trousers. The man on the right is wearing a light blue shirt, glasses, and dark trousers, and is pointing at a laptop held by the first man. They are standing in front of several rows of server racks with glowing blue lights. The background is a dark server room with a light blue floor.

**ProSource**  
we clean the cloud.

# Guide to data center cleaning

# Why cleaning your data center is important

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## Cleaning improves equipment reliability and prevents downtime



- **Essential maintenance** recommended by hardware manufacturers & ASHRAE to manage contamination buildup in the critical environment.
- **Improve reliability** by monitoring, cleaning, and optimizing the environment for servers by minimizing airborne contamination build-up in critical areas.
- **Prevent downtime** by removing contamination build-up through by routine maintenance cleaning at least annually, and continually monitoring indoor air quality.

# Contamination sources & effects

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## Hidden contamination is overlooked and builds up overtime



- **Contamination sources** include fine dust, fibers, ferrous metal, and VOCs that naturally accumulate over time in the environment.
- **Contaminants are often overlooked** because they're hidden under raised floors & migrate inside servers through the cooling systems airflow.
- **Contamination builds up** over time in subfloor and ceiling plenums, as well as 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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## Cleaning and monitoring contamination helps avoid downtime



- **Prevent contamination** by routinely vacuuming and removing harmful contaminants that have become settled in critical areas.
- **Control contamination** particles from migrating into equipment by preventing buildup in subfloors and ceiling plenums, floor and equipment surfaces, and inside server cabinets.
- **Avoid downtime** with a routine maintenance program that includes recommended cleaning services combined with continuous indoor air quality monitoring and purification treatments as needed to maintain recommended levels according to ISO 14644 Class 8 standards.

# Prevention & control of contamination

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## Use experienced and certified vendors

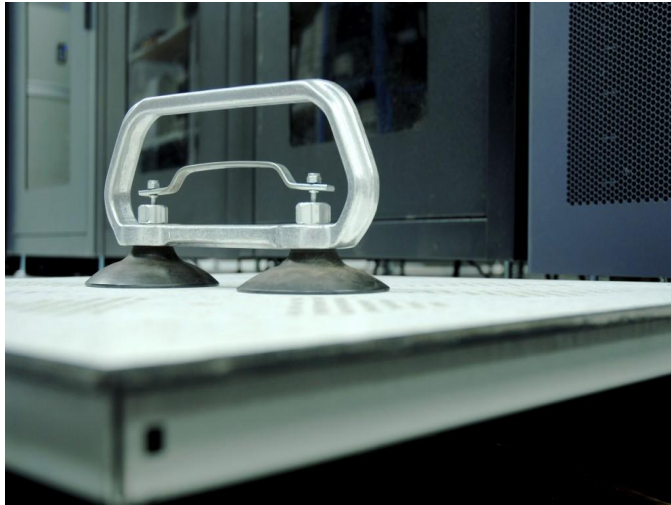


- **CIMS Certified vendors** take out the guesswork of identifying a quality, customer-focused, and professional cleaning organization.
- **Experienced vendors** are focused on data center cleaning and can safely clean your critical areas unlike regular janitorial services.
- **Proper cleaning equipment** provides the highest capture rates of contamination and are safe to operate near servers in your critical environment.
- **Trained personnel** understand data centers and use proper cleaning procedures to ensure quality and safety.
- **Industry standards** include cleaning subfloor and ceiling plenums, floor and equipment surfaces, and monitoring airborne contamination.

# Industry standards & recommendations

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Experts recommend routine cleaning and monitoring as best practices



- **Subfloor and ceiling plenums** should be vacuumed at least once per year because airflow sweeps up built up contamination into server components.
- **Raised floors** should be thoroughly cleaned four times per year to maintain static dissipative properties and prolong the life of high pressure laminated panels.
- **Equipment surfaces** should be vacuumed and wiped clean four times per year to remove contamination.
- **Continuous air monitoring** should be employed to ensure the indoor air quality in your data halls meet ISO 14644 Class 8 standards to avoid voiding server equipment warranties.

# What to look for in a vendor

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## Use specialized vendors focused on data center cleaning



- **Customer references** from data centers that can confirm their experience and quality of work.
- **Industry certifications** like CIMS, the Cleaning Institute Management Standard or an equivalent organization that independently verifies a vendor meets minimum standards for cleaning procedures, quality, and safety.
- **Proper equipment** is used like critical-filtered vacuums to ensure quality and safety when cleaning data halls.
- **Trained employees** that understand your critical areas and have been background and drug screened, and completed company compliance training.
- **Coverage & scheduling flexibility** that meet your maintenance windows for data center locations.

# Case study

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## Data center downtime due to unchecked contamination



- **Situation:** unseen contamination generated by misaligned belts in air handlers created fine black airborne dust throughout the data hall.
- **Issue:** small particles accumulated over time in hidden areas under the floor and migrated into server components causing failures.
- **Solution:** cleaning to remove contaminants from the subfloor, air handlers, cabinets, and server components were necessary to restore service to the data hall.
- **Results:** several days of interruption with hundreds of thousands of dollars in downtime and mitigation costs that could have been avoided with continuous air quality monitoring and a preventive maintenance cleaning program.

# Why you should consider ProSource

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We've been a trusted partner for data centers since 1994



- CIMS certified with proven experience
- Local service with nationwide coverage
- Competitive pricing with quality guarantee
- Flexible scheduling 7/24/365
- Trained & uniformed company employees
- Integrated air quality monitoring and purification



# Contact Us

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## Ensuring Data Centers Stay Clean and Compliant



Rich Reedy

Director of Sales

(312) 213-6208

[rich.reedy@team-prosource.com](mailto:rich.reedy@team-prosource.com)

[www.team-prosource.com](http://www.team-prosource.com)