



# Mission-Critical Facility Services Predictive & Preventive Maintenance

**PRETECT** DCD>Connect | New York 2026 | March 23–24, 2026

**PROTECTING UPTIME. EXTENDING  
ASSET LIFE. ELIMINATING SURPRISES.**

**25+**

Years of  
Mission-Critical  
Experience

**500+**

Data Center  
Inspections  
Completed

**100%**

NYC-Region  
Customer  
Retention

**24/7**

Emergency  
Response  
Capability

## **SPOTLIGHT: Motion Amplification Technology** – See what the naked eye cannot

### **What is Motion Amplification?**

Motion Amplification is a proprietary video-based vibration analysis technology that makes invisible structural movement visible – amplifying micro-vibrations by thousands of times without physical contact. **PreTect USA** is one of a select group of certified operators deploying this technology in data center environments across New York and the Northeast.

### **Stop hidden vibration faults before they take down your data center:**

- Detect resonance and structural fatigue in raised floors, cable trays, and equipment frames – long before physical failure
- Non-contact vibration mapping of UPS systems, PDUs, generators, and precision cooling equipment
- Identify imbalanced rotating equipment (CRAC/CRAH units, pumps, fans) without interrupting operations
- Document baseline vibration signatures for trend analysis and warranty defense
- Pinpoint vibration transfer between adjacent equipment causing cascading wear

### **Proven New York City Results**

#### **Tier IV Colocation, Manhattan:**

Detected cooling unit bearing failure 6 weeks before predicted MTBF – avoided unplanned downtime during peak trading hours

#### **Financial District Data Hall:**

Identified raised floor resonance pattern causing server rack vibration – structural remediation prevented \$2M+ equipment exposure

#### **Carrier Hotel, Midtown NYC:**

Mapped UPS transformer micro-movement revealing loose mounting hardware – corrected before a seismic event could escalate the risk

#### **Enterprise DC, NJ Metro:**

Baseline motion signature established across 48 CRAH units – enabled trend-based PM scheduling, reducing service visits by 30%

## **Why Data Center Leaders Trust PreTect USA**

### **Mission-Critical DNA**

**PreTect USA** was built specifically for high-availability environments. Our protocols respect change management, maintenance windows, and zero-tolerance uptime requirements.

### **NYC & Northeast Region Expertise**

Deep familiarity with the infrastructure demands, union labor environments, building code requirements, and tenant/carrier relationships unique to New York City data centers.

### **Independent & Vendor-Agnostic**

We work across all manufacturers and OEM equipment. Our recommendations are driven solely by your facility's performance data, never vendor relationships.

### **Certified Expertise**

Team certifications include NETA ATS, OSHA 30, NFPA 70E, Infrared Thermography Level II, Motion Amplification Operator, and manufacturer-specific training across major equipment platforms.

### **Actionable Reporting**

Every engagement delivers a structured report with ANSI/NETA priority codes, photographic and video evidence, cost-risk modeling, and a prioritized corrective action schedule.

### **Track Record of Preventing Failure**

**PreTect USA** has proactively identified over 200 critical deficiencies in NYC-region facilities over the past five years, each one a potential unplanned outage avoided.

# Comprehensive Preventive Maintenance Services for Data Centers

## Electrical Infrastructure Preventive Maintenance (PM)



- Thermographic (infrared) scanning of switchgear, PDUs, and busway
- Power quality analysis: harmonics, transients, voltage imbalance
- Battery impedance testing and capacity verification (VRLA, Li-ion)
- Load bank testing of generators and UPS systems
- Torque verification and connection integrity on all critical terminations

## Mechanical and HVAC Systems



- Motion Amplification on machinery, piping, and structures
- Vibration analysis on chillers, cooling towers, and pumps
- Oil analysis and refrigerant management for precision cooling
- Airflow studies and computational fluid dynamics (CFD) mapping
- Belt, bearing, and drivetrain inspection with predictive trending
- Condenser and evaporator coil efficiency analysis

## Advanced Diagnostics and Reporting



- Ultrasonic leak detection on compressed air and electrical systems
- Partial discharge detection on medium and high-voltage equipment
- Motor current signature analysis (MCSA)
- Digital twin asset health dashboards with trend baselines
- ASHRAE-compliant thermal assessments and compliance documentation

## Schedule your complimentary facility risk assessment

Stop by our booth or connect with Tom O'Connell directly at **DCD>Connect** to arrange a no-cost preliminary assessment of your facility's preventive maintenance program. Limited scheduling available for Q2 2026.

### Connect at **DCD>Connect NYC**

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March 23-24, 2026 | New York City



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