

# Save Money by Monitoring Your Data Center

Your data center should run like a well-oiled machine, but if something suddenly goes wrong you are forced into expensive downtime. Monitoring and management solutions prevent severe financial loss by catching symptoms of issues before they become large problems. Preventative maintenance is less expensive and less stressful than having to fix one or more immediately. So, follow this tracking list to start saving money by monitoring your data center.



## Every Piece of Equipment

Before you start monitoring how all your systems work together, you must monitor each device individually. How much and what kind of equipment you have depends on the needs of your facility. Most data centers and other high-tech facilities will have the following devices that require monitoring:

- ☐ IT Servers
- ☐ Server Racks
- ☐ Networking Equipment
- ☐ Backup Generators
- ☐ Uninterruptible Power Supplies (UPS)
- ☐ Power Distribution Units (PDUs)
- ☐ Cooling Systems
- ☐ Access Control Systems
- ☐ Surveillance Cameras

## Hardware and Storage

All your equipment has hardware that needs to be monitored to catch any errors or inefficiencies that could get worse. The equipment listed above, and the hardware listed below are what make high tech facilities run efficiently. Even one slow or malfunctioning device could impact the functionality of a service or system. This could be avoided by monitoring:

- ☐ CPU utilization
- ☐ Memory usage
- ☐ Uptime
- ☐ Storage capacity
- ☐ Error rates

## Network Connectivity

Your systems must be able to access the network so they can receive and deliver data. To ensure your network connectivity is stable be sure to monitor:

- ☐ Response time of all devices on the network
- ☐ Bandwidth availability (how much data can travel through your system at any time)
- ☐ Jitter (inconsistencies in data packet arrivals)
- ☐ Packet loss (how often data doesn't get where it's going)

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### Security Threats

Your data center must be on the lookout for physical and cybersecurity threats as both can lead to unauthorized access and data loss. To make sure your facility is protected from every angle you must monitor:

- ☐ Surveillance cameras
- ☐ Access control systems
- ☐ Door access mechanisms
- ☐ Cloud-based systems
- ☐ Antivirus software
- ☐ Firewalls
- ☐ Networks

### Power Consumption

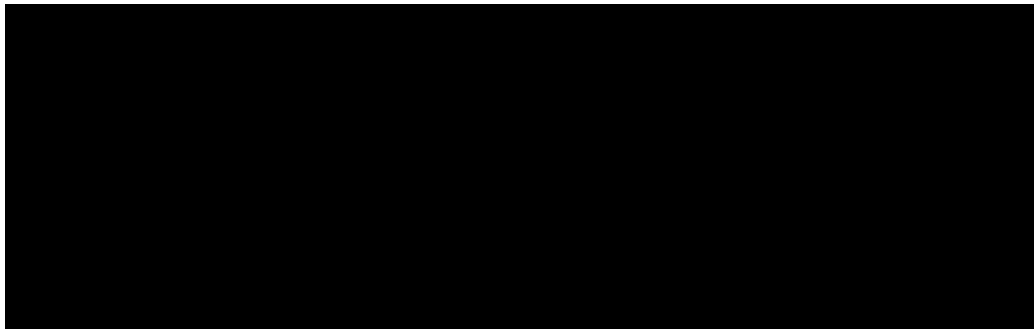
Monitoring how much power your facility uses not only prevents overloading, but it can also help you find areas of improvement and reduce operational costs. You should watch out for any drops in efficiency, but you should especially look at how power is being used in these devices:

- ☐ Power Distribution Units
- ☐ Uninterruptible Power Supply
- ☐ Cooling Systems

### Environmental Conditions

Despite being indoors, your data center equipment faces plenty of changes in the environment that need to be monitored. You can prevent hardware damage or outages by keeping an eye on these environmental conditions:

- ☐ Temperature
- ☐ Humidity
- ☐ Airflow
- ☐ Water Leakage
- ☐ Smoke



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