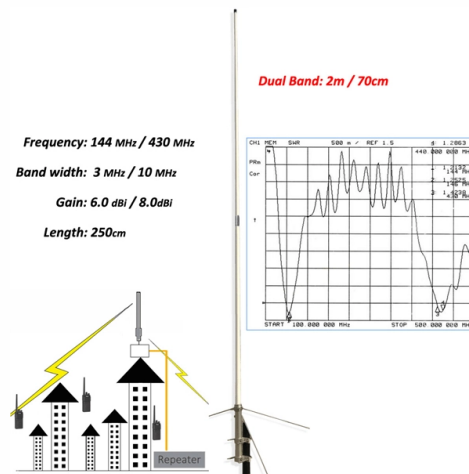


Temperature and humidity in the cold aisle of the computer room



Overview

According to the American Society of Heating, Refrigeration, and Air-Conditioning Engineers (ASHRAE), server rooms should be kept at 59 degrees F to 89. They should also have a relative humidity of 20 percent to 80 percent. Maintaining the proper temperature and humidity levels in a data center is critical for any organization with an on-premises IT. If you're worried about your PC or data center operating at the right temperature, you're on the right track: The combination of ambient temperature and relative humidity (RH) directly affects reliability hardware performance and lifespan. We're not just talking about convenience; we're talking. However, delta-T is very important - the temperature differential between the hot aisle and the cold aisle. Increasing delta-T results in dual benefit of reducing the fan motor. Maintaining a safe and consistent data center humidity range is just as critical as controlling temperature. Inside mission-critical environments, even small humidity fluctuations can lead to costly downtime or damage to sensitive electronic equipment. At low humidity, static electricity can build. Powerful computer room air conditioning (CRAC) systems must be supplemented with aisle containment, raised floor cooling, and other techniques to prevent damaging hotspots and maintain the proper environment for IT equipment. The guidelines were presented.

Article Content

Temperature and humidity control in data centres

In Part 1, we look at data centre energy efficiency In Part 2, we look at temperature & humidity control In Part 3, we look at the importance of

Optimizing HVAC in Data Centers: Precision Cooling, Containment,

Overview Of Data Center HVAC Data centers require controlled environments with stable temperatures, humidity, and clean air. The goal is to keep inlet temperatures within ASHRAE

The Ideal Temperature and Humidity for your Server

Ensuring the right temperature and humidity in server rooms and data centres is crucial to protect IT equipment and maintain reliable operations.

Optimizing Data Center Cooling: The Power Of Hot And

Discover how to optimize your data center cooling system with hot and cold aisle containment. Learn about the assessment, design, installation,

AI Data Center Cooling Requirements 2026: Complete GPU Thermal

Comprehensive guide to cooling AI infrastructure. From 700W H200 to 1,400W MI355X GPU thermal management, ASHRAE guidelines, and PUE optimization.

ASHRAE Recommended Data Center Temperature

In this article, we'll be taking a look at the updated ASHRAE recommended data center temperature and humidity ranges, and how environment monitoring with

How to Cool a Server Room or Network Closet | Enconnex

Learn how to effectively cool a small server room, network closet, or edge facility. Get benefits, tips, & best practices from the experts at Enconnex.

United Kingdom Data Center Market Growth Report 2031

The United Kingdom Data Center Market worth USD 17.24 billion in 2026 is growing at a CAGR of 13.17% to reach USD 31.99 billion by 2031.

Data Center Temperature & Humidity Best Practices: A

Data center temperature and humidity best practices so you can meet device guidelines while saving money and optimizing performance.

Hot and Cold Aisle Containment: What You Need to Know

Hot aisle containment systems isolate the hot aisle using a similar enclosure system to that of a cold aisle with a sealed door for access. This

Hot and Cold Aisle Containment: What You Need to

Aisle containment is a physical means of separating hot (exhaust) and cold (supply) air. It can be accomplished via thoughtful room design, cabinet

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Data Center Temperature & Humidity Best Practices: A

These data center temperature and humidity best practices for environmental monitoring, power usage tracking, and efficient cooling will help you meet those

Why should the computer room design hot and cold

The long arrangement of cabinets also provides conditions for low-cost handling of the isolation of hot and cold aisles. The airflow organization in the equipment

CRAC vs CRAH Units for Data Centers

In today's data-driven world, selecting the right cooling system is critical for the reliability and efficiency of data centers. Understanding the difference between CRAC (Computer Room Air ...

Data Center Aisle Containment

In cold aisle configurations the supply air is contained and the hot discharge air allowed to return to the CRAC unit. Because the supply and return air are kept

Modular Data Center with Improved Cooling and Plug-and-Play

High-efficiency Modular Data Center featuring improved return air temperature, plug-and-play deployment, and row-level near-end cooling for optimal performance.

Ideal temperature and humidity for computers and data

Therefore, in data centers, it is recommended to measure temperatures in aisles at various heights, as well as monitoring the top of the rack, where hot air tends to

Expert Server Room Cooling and Monitoring Best Practices

If temperature, airflow, and humidity are all within proper ranges in the most extreme spots in your server room, you can rest assured that your cooling systems and equipment distribution are working out.

Data Center Temperature: Hot And Cold Aisle

Hot and cold aisle containment systems are crucial for data center temperature. Click to learn about airflow, cooling efficiency, and thermal

How Data Centers Stay Cool: Technologies and Strategies for Optimal ...

Managing temperature and humidity in these facilities is essential to maintaining equipment performance, minimizing downtime, and extending the lifespan of costly hardware. Let's dive into

ASHRAE TC 9.9 Thermal Guidelines (5th Ed.) — A1-A4 Limits

Complete ASHRAE TC 9.9 reference: A1-A4 class temperature & humidity ranges, dew point limits, and liquid cooling trends. With comparison tables and HVAC design recommendations.

Data Center Monitoring

The datacenter temperature and humidity guidelines set by the American Society of Heating, Refrigeration, and Air Conditioning Engineers (ASHRAE) has created a widely accepted set of

Temperature and humidity control in data centres

Cooling and ventilation require careful control, and it is important to deploy high efficiency fans, maintain a slight positive building pressure, and to

What is a Safe Data Center Humidity Range?

Discover what is a safe data center humidity range and how it affects equipment reliability and uptime in critical environments.

Move to a Hot Aisle/Cold Aisle Layout

A Time-tested Technique The hot aisle /cold aisle data center layout was originated by IBM in 1992 and it is one of the oldest ways to save energy in the data

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