Standard values of temperature and humidity in the hot aisle of the computer room



Overview

Recommended environment: 20–24 °C and 45%–55% RH; in servers, inlet 18–27 °C according to ASHRAE. Monitoring and alerts: sensors in aisles/racks, software tools and alerts. These guidelines, published in the Thermal Guidelines for Data Processing Environments, provide the temperature and humidity parameters that IT manufacturers use to specify equipment operating conditions and that data center operators rely on to maintain equipment reliability. The settings below apply to A1-A4 class data centers and server rooms. What Are ASHRAE Recommended Temperature & Humidity Ranges?

Temperature ASHRAE. Typical requirements: minimum temperature is 15°C, maximum temperature is 32°C, minimum RH is 20%, maximum RH is 80%, maximum dew point is 22°C, rate of change of temperature is less than 5°C/h, rate of change of humidity is less than 5% rh per hour, and no condensation. Industry guidelines from ASHRAE provide a solid starting point, but translating those specs into a working cooling design takes careful calculation and planning.

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Article Content

ASHRAE TC 9.9: Data Center Thermal Guide | 2026

You will learn the specific temperature and humidity parameters for different equipment classes, understand the reliability implications of environmental control, and discover how automated

Ideal temperature and humidity for computers and data centers

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 accumulate. Regarding relative

Data center temperature and humidity guidelines

ASHRAE maintains a recommended list of humidity and temperature level standards for data centers. Discover which range of guidelines is best for each equipment class.

Recommended standards for monitoring server rooms and data centers

When using hot corridors it is important to monitor temperature across the room to ensure that sufficient cold air gets to each rack. In this case however one can also rely on rack based temperature sensors

ASHRAE Class 1 Data Center Standards | PDF

It recommends maintaining a temperature between 18-27°C, humidity at 60%RH, and limits the maximum rate of temperature change to 5°C per hour and dew point to 15°C. These parameters are

ASHRAE Recommended Data Center Temperature & Humidity

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 Room Alert can help you keep your facilities

Equipment Thermal Guidelines for Data Processing Environments

Typical requirements: minimum temperature is 15°C, maxi-mum temperature is 32°C, minimum RH is 20%, maximum RH is 80%, maximum dew point is 22°C, rate of change of temperature is less than

Server Room Cooling Requirements: Temperature and Humidity Guide

This guide walks you through the temperature and humidity standards, heat load calculations, and cooling capacity sizing you need to get your server room environment right.

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Data Center Temperature & Humidity Best Practices: A Complete

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

Temperature and humidity control in data centres

However, delta-T is very important - the temperature differential between the hot aisle and the cold aisle. Typically, delta-T is around 10 to 12°C (18 to 21.6°F), but 14°C (25.2°F) is a

ASHRAE Recommended Data Center Temperature

Data centers that are operating outside of ASHRAE recommended temperature and humidity ranges are at direct risk for potential disaster.

Ideal temperature and humidity for computers and data

Optimal ambient temperature and recommended relative humidity For general-purpose computer rooms and data centers, maintain an environment between 20

ASHRAE TC9.9 Data Center Power Equipment Thermal Guidelines

vironmental areas: ballroom spaces, hot aisles, cold aisles, and grey areas. Many data center designs have computer rooms where cold air is distributed through a raised floor system tha

Data Center Temperature & Humidity Best Practices: A Complete

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

Recommended standards for monitoring server rooms

Background Info: Ambient server room monitoring or data center monitoring is the environmental monitoring of the room for its humidity and temperature levels.

Equipment Thermal Guidelines for Data Processing Environments

Tape products require a stable and more restrictive environment (similar to 2011 Class A1). Typical requirements: minimum temperature is 15°C, maxi-mum temperature is 32°C, minimum RH is 20%,

Humidity Control in Data Centers

To maintain production in environments that used these paper products, close humidity control was a must. Similarly, magnetic media used for long-term data storage, such as tape or disk, were also

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Data Center Monitoring

The lower the air suppler temperature in the data center the higher the cooling costs (which represent a massive cost for the data center user). Differential pressure monitoring can be used to check the

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