

What does a cold aisle in a computer room include



Article Overview

A cold aisle system is a data center cooling strategy that isolates cold air in front of server racks to ensure efficient and consistent cooling of IT equipment.

Overview

A cold aisle system arranges server racks so that the fronts of the racks face each other, forming a corridor known as the cold aisle. Cooled air from computer room air conditioning (CRAC) units or perforated floor tiles is delivered directly into this aisle. Servers draw this cold air through their front intakes, absorb heat, and expel warm air out the back into adjacent hot aisles, preventing hot and cold air from mixing and maintaining optimal operating temperatures for equipment .

Cold Aisle Containment (CAC)

Cold aisle containment enhances this system by enclosing the cold aisle using doors at aisle ends, ceiling panels, or lids above racks. This creates a sealed zone where only cold air exists, ensuring that servers consistently receive air at the desired temperature. Containment prevents cold air from escaping and hot air from recirculating into the cold aisle, which reduces energy consumption and eliminates hot spots .

Key Components...

Article Content

Jun 21, 2026

Cold Aisle Containment & Hot Aisle Containment

Executive Summary of Aisle Containment This article examines cold aisle containment and hot aisle containment (also known as

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What To Know About Hot-Aisle, Cold-Aisle, And Chimney

The concept of containment began with the introduction of hot-aisle, cold-aisle arrangements and the standardization

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Hot vs Cold Aisle Containment: Which Datacenter Cooling Strategy Is ...

Additionally, cold aisle containment integrates seamlessly with overhead cooling systems and can be implemented

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What are hot and cold aisles in the data center?

In its simplest form, hot/cold aisle data center design involves lining up server racks in alternating rows, with cold air

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How to Make the Right Choice? Comparison between the Enclosed Cold ...

After arranging the cold (hot) aisle in the computer room, the cold air volume (Q1) required by a single rack remains

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What is the Purpose of a Hot Aisle & Cold Aisle Arrangement?

The segmentation of data centers and server rooms into alternating cold and hot aisles has been embraced globally over recent

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Hot Aisle vs Cold Aisle in Data Centers: Technical Impact, ROI, and ...

What Are Hot Aisle / Cold Aisle Configurations? Data centers are ovens if left unmanaged. Hundreds, sometimes

May 23, 2026

Data Center Aisle Containment

Traditional open aisle data centers use perimeter PAC (precision air conditioning) or CRAC (computer room air conditioning) units to

Sep 17, 2025

Aisle Containment Systems for Hot & Cold Aisle Solutions

Cool Shield Aisle containment solutions reduces server row temperatures in active data centers. [Learn](#)

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Hot Aisle vs Cold Aisle Containment | AMCO Guide

Ultimately, before deciding which system to go with, you will need to evaluate your computer room and determine which containment

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Hot and Cold Aisle Containment Systems: How They Work and Why

One of the best ways to protect your servers from overheating is by installing a hot or cold aisle containment system.

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Impact of Hot and Cold Aisle Containment on Data Center

Both hot-aisle and cold-aisle containment provide significant energy savings over traditional uncontained configurations. This paper

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The Advantages And Disadvantages Of Hot-Aisle, Cold-Aisle

But there are some disadvantages to cold-aisle containment. Allowing the discharge air from the hot aisle to fill the

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Cold Aisle Containment | Legrand

By maintaining consistent, predictable temperatures, cold aisle containment minimizes thermal stress and reduces the risk of

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Hot Aisle vs. Cold Aisle Containment: DCIM Guide

Cold aisle containment seals the aisle where servers draw in cool air, keeping the supply air concentrated at server

Aug 06, 2025

Explore hot and cold aisle containment for your data center

Hot and cold aisle containment can help you maintain the best air flow, temperature and humidity in the data center to

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Aisle Containment Systems Physical Containment Systems ...

Hot aisle/cold aisle configuration is a best practice solution that separates hot and cold air streams. This method raises the

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Data Center Containment: Types, Benefits & Challenges

The air from the enclosed hot aisle is returned to cooling equipment via a ceiling plenum or duct work, and then the

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Data Centre Cooling: Hot Aisle and Cold Aisle Design

Here's a brief overview of how this arrangement works: Cold Aisle: In the cold aisle, the fronts of all server racks face each other.

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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

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Cold Aisle Containment in Data Centers

Cold aisles include the front of the servers where cold air is drawn in, while hot aisles are where hot air is expelled.

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Hot and Cold Aisle Containment Systems: How They Work and Why

Hot aisle containment (HAC) and cold aisle containment (CAC) are the most efficient ways of preventing your servers

Dec 07, 2025

A DEEP DIVE INTO THE WORLD OF HOT & COLD AISLE

AISLE CONTAINMENT Aisle containment is a crucial strategy in data center management. It involves the use of physical barriers or

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Cold Aisle Containment: The Ultimate Guide To

The “cold” aisle delivers cool air to the front of the servers, while the “hot” aisle expels heated exhaust air

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Move to a Hot Aisle/Cold Aisle Layout

Hot aisle/cold aisle layout can still be used in server rooms without raised floors: distinct hot and cold aisles can be created by

Contact Us

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