Data Center Layer 3 Interconnect



Overview

Layer 3 Extension: Provides routed connectivity between data centers used for segmentation/virtualization and file server backup applications. Figure 2-1 summarizes the three general types of. Data Center Interconnect (DCI) is the foundational technology that enables the seamless connection of geographically dispersed data centers into a unified infrastructure. In essence, DCI facilitates the transfer of data, applications, and services across multiple sites, ensuring high availability. The data center core layer provides a fabric for high-speed packet switching between multiple aggregation modules. DCI is essential for ensuring business continuity, disaster recovery, workload mobility, multi-site. CX switches provide a robust platform for Layer 3 services in the data center.

Article Content

Data Center Interconnect (DCI) — Design

Layer 3 data center interconnect solutions operate at the routing level, enabling autonomous routing domains across sites. This approach offers enhanced scalability, simplified management, and better

Cisco Data Center Infrastructure 2.5 Design Guide

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Data Center Multi-Tier Design OverviewData Center CORE LayerData Center Aggregation LayerData Center Access LayerThe data center core layer provides a fabric for high-speed packet switching between multiple aggregation modules. This layer serves as the gateway to the campus core where other modules connect, including, for example, the extranet, WAN, and Internet edge. All links connecting the data center core are terminated at Layer 3 and typically use 10 Gig...See more on cisco Images of Data Center Layer 3 InterconnectData Center Optical InterconnectNetApp InterconnectData Center NetworkData Center Interconnect DesignData Center ConnectivityLocal Interconnect NetworkInterconnect TechnologyFabric Interconnect DesignFiber InterconnectWhat is Data Center Interconnect? Definition, Options & Benefits 2025 ...Data Center Interconnect (DCI) Overview, Everything You Need to Know ...Data Center Design: Basic 3 Layers, Core, Aggregation, and Access ...What is data center interconnect (DCI)? - Definition from WhatIs PPT - Cisco Data Center Network Architecture PowerPoint Presentation ...Data Center Interconnect Design and Implementation Using IPVPN ...Data Center Interconnect Design Guide for Virtualized Workload Mobility ...Grundlagen Data Center Interconnect Lernen – JKAULData Center Interconnect Reference Design Guide | Technical GuidesWhat is Data Center Interconnect (DCI)? - GreenCloud - Affordable KVM ...See all imagesVyOS

Data Center Interconnect (DCI) with VyOS

Connect distributed data centers with high-performance VyOS DCI solutions. Encrypted L2/L3 interconnects using VXLAN, IPsec, and BGP EVPN for reliable site connectivity.

Data Center Connectivity Design

The connection between data center fabrics is referred to as a data center interconnect (DCI). Layer 2 and Layer 3 network segments are extended between fabrics using the same VNI

DCI Design Models | From Layer 2 to Layer 3 Explained

Explore DCI design models from L2 to L3 with key differences, benefits, and deployment strategies for modern data centers.

AI Data Center Interconnect 2026: CPO, Optical Interconnect and ...

Explore AI data center interconnect trends in 2026, including CPO, optical interconnect, OCS, and the real challenges slowing large-scale deployment.

DCI Topologies | Technical Guides

There are several ways to interconnect the physical layer of multiple data centers. The most popular deployment strategies include dark fiber interconnect and dense wavelength division multiplexing

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Data Center Interconnect: A Guide to DCI and Connectivity

DCI circuits can operate at different network layers, with Layer 2 and Layer 3 being the most common options. Understanding these differences helps you choose the right approach for

How to Build Layer3Data Center Interconnect (DCI)

How to Build Layer3 Data Center Interconnect (DCI) Jiri Chaloupka – Cisco Technical Marketing Engineer 04/2020

AI Infrastructure in 2026: How Optical Interconnect Is Reshaping the ...

AI Infrastructure in 2026: How Optical Interconnect Is Reshaping the Future of Data Centers AI is no longer simply driving demand for compute. It is restructuring the entire infrastructure

Data Center Interconnect Market Growth Opportunities To 2035

Data center interconnect (dci) market to reach $53,242.4 million by 2035, driven by expansion of digital transformation strategies.

Industry insight: photonics to scale AI data centers

This paper explores how photonic technologies can address these system-level scaling challenges across the multiple layers of the AI data center—from chip packages to rack-scale and

NVIDIA Just Rewired the AI Factory — And Networking Is Now the

NVIDIA now has a three-layer interconnect strategy: NVLink 6 inside the rack InfiniBand for training clusters Spectrum-X Ethernet for AI data centers and inference Each layer maps to a

AI Data Center Networking: How GPU Clusters Are Changing

3. NVLink and NVSwitch: Inside the GPU-to-GPU Interconnect Before examining the external network fabric, it is essential to understand the intra-server interconnect layer — NVLink and

Data Center Networking Solutions

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Cisco Nexus One, next-generation data center networking architecture

Learn how Cisco Nexus One enables an open, flexible data center architecture. Standardize your network with support for ACI, NX-OS, and SONiC to accelerate AI innovation and

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NVIDIA Q4 FY 2026 Earnings: Durable AI Infrastructure Demand

NVIDIA Q4 FY 2026 earnings reflect durable AI infrastructure demand, driven by data center scale, networking growth, and agentic AI adoption.

Data Center Optical Transceiver Market Size, Share, Trends

The data center optical transceiver market is segmented across five primary dimensions, reflecting the multi-layered purchasing decision that operators make when specifying optical interconnect

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