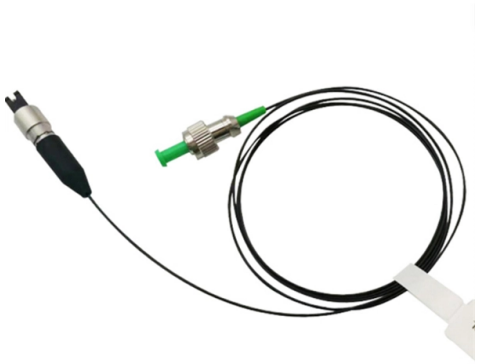
Data Center Interconnect Layer 2



Overview

A connection between two or more data centers is called a Data Center Interconnect (DCI). An L2 DCI bridges L2 traffic across the transport network. Figure 2-1 summarizes the three general types of. VxLAN is a popular choice for extending Layer 2 both intra and inter DC using overlays. In this article, two approaches to designing a L2 DCI over a L3 underlay are discussed. The VXLAN stitching feature enables you to stitch together specific VXLAN Virtual Network Identifiers (VNIs) to provide Layer 2 stretch between. Layer 2 Data Center Interconnect is used when applications, clusters, or migration workflows need the same Ethernet segment or VLAN to exist across more than one site. It can simplify workload mobility, preserve IP addressing, support legacy dependencies, and enable certain active-active or staged. For more than 20 years we have been using Layer 3 connectivity powered by dynamic routing protocols to route traffic between data centers, but adoption of virtualization and geo-clustering technologies is forcing us to re-examine our data center interconnect (DCI) models. New data center: The. At its core, Cross-Site Interconnect is a transparent, on-demand, layer 2 connectivity solution that leverages Google's global infrastructure, letting you simplify, augment and improve your reliability posture across the WAN for high-performance and high-bandwidth connectivity use cases.

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Article Content

Data Center Interconnect Solution Overview

Figure 2-1 summarizes the three general types of connectivity required for a DCI solution. • LAN Extension: Provides a single Layer 2 domain across data centers. The data center applications are

Layer 2 Data Center Interconnect

In this article, two approaches to designing a L2 DCI over a L3 underlay are discussed. High-level technical details of each design approach is described first,

Configure VXLAN Stitching for Layer 2 Data Center

This document describes the configuration and validation steps for implementing Data Center Interconnect (DCI) using VXLAN stitching in a gateway device. The

Layer 2 Data Center Interconnect options

Layer 2 Data Center Interconnect is used when applications, clusters, or migration workflows need the same Ethernet segment or VLAN to exist across more than one site.

Layer 2 Data Center Interconnect options

All Layer 2 Data Center Interconnect technologies discussed so far are industry standards. Let us now look into two innovative proprietary

Cross-Site Interconnect, now GA, simplifies L2

At its core, Cross-Site Interconnect is a transparent, on-demand, layer 2 connectivity solution that leverages Google''s global infrastructure, letting

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

External Routing with Layer-2 Data Center Interconnect

Layer-2 DCI is the least desirable data center interconnect solution , as it extends a single broadcast domain (and thus a single failure domain) across multiple

DCI Design Models | From Layer 2 to Layer 3 Explained

Layer 2 DCI extends Ethernet connectivity across data centers, maintaining the same broadcast domain. This approach is suitable for applications that rely on the same IP subnet for

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Data Center Interconnects

Are you familiar with the modern Data Center Interconnect (DCI) technologies? Can you decide when to implement layer-2 DCI ... or defend your decision to stick with routing between data centers?

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At NVIDIA GTC Taipei at COMPUTEX, the world''s developers, researchers and industry leaders are converging to dive into the latest breakthroughs shaping every industry, covering topics

⚡ The $NVDA 800 VDC architecture pivot is the largest power ...

□□ $FCEL - Pivoting hard to AI data centers. 80% of pipeline now data center. 12.5 MW standardized power blocks launched March 2026. 1.5+ GW data center proposals.

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$GFS EXECUTIVE OVERVIEW GF introduced SCALE,

GF''s own silicon-photonics page frames the problem similarly, stating that copper wiring is becoming prohibitive from power-consumption, data-rate,

The next big shifts in AI workloads and hyperscaler

AI workloads are reshaping data center economics, power planning, and leasing decisions. Their influence is already evident across most new builds

I''m long $ADTN

He also said large data center connectivity is not ADTN''s sweet spot, it is the smaller interconnect architectures where they play well. So this is not ADTN becoming Lumentum overnight.

Nvidia to invest $4B into photonics companies

Nvidia is investing a combined $4 billion in Coherent and Lumentum, two photonics companies. Each company will receive $2 billion each from the

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This document is for preliminary research. Verify specifications against current standards, product documentation and project requirements.

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