

Infinera CX Series

Break Free with Extreme Simplicity, Hyperscalability, Space and Power Efficiency, and Built-in Security

TRANSFORMING DATA CENTER INTERCONNECT FOR THE CLOUD ERA

The world is migrating to the cloud. Cloud services, including infrastructure as a service (IaaS), platform as a service (PaaS), and software as a service (SaaS), are booming. Enterprises are adopting hybrid cloud strategies combining public and private clouds. Cloud-based content providers are growing at an astounding rate. As cloud adoption grows, cloud network infrastructure expands, with larger hyperscale data centers and an explosion of regional data centers in every major metro area around the world. Metro cloud ecosystems grow to enable richer interconnection and better service experience for users, wherever they are.

Interconnecting data centers with simplicity, scalability, efficiency, and security is a key challenge for cloud and content providers, enterprise cloud customers, and everyone participating in the metro cloud ecosystem. The Infinera Cloud Xpress (CX) Series is purpose-built to meet this challenge.

WHY DATA CENTER NETWORKS NEED CLOUD XPRESS

Whether it's used for search, social networking, or enterprise business applications, the cloud, a distributed computing model built upon multi-server and multi-data center infrastructure, has become ubiquitous. In fact, enterprises find immediate value in the cloud as it is one-third as expensive to rent a cloud server as to own one. Demand for these applications has led to the exponential growth of the cloud, which in turn is dramatically transforming IT and network architectures. The rise of compute and storage virtualization was the technology driver to make the cloud viable, and the network is the critical glue that ultimately makes a cloud a cloud.

Cloud growth drives tremendous demand for bandwidth to interconnect data centers. For example, a single social media web request is distributed across several hundred servers within and between data centers. A leading provider quantified the impact of a single 1-kilobyte (KB) request to require 930 KB of internal network data transfers. Another provider found that each search query generates internal network messages that travel an average distance of 2,400 kilometers (km), most of which is between data centers within the cloud. Interconnecting these data centers and continually adding data center interconnect capacity to enable cloud growth requires:

- High capacity with rapid scalability
- Simplicity and automation
- Space and power efficiency

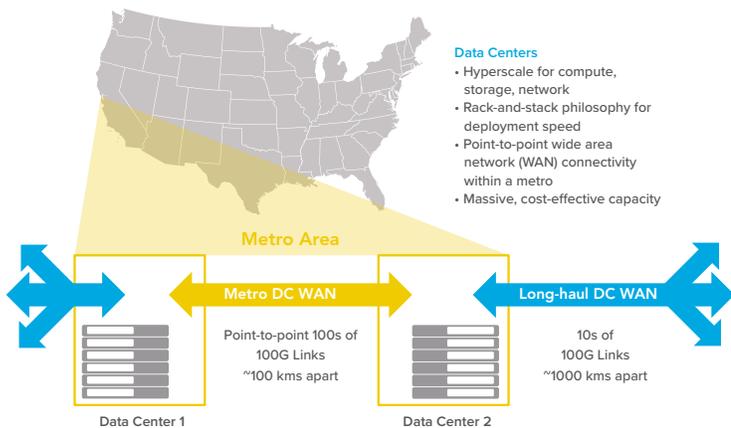
Increasingly, cloud networks also require built-in, in-flight wire-rate data encryption capabilities for high security without compromising on scalability, simplicity, or efficiency.

In short, cloud data center operators need the Infinera CX Series of rack-and-stack network appliances that offer simplicity, scalability, efficiency, and security, so they can spend more time driving growth in applications and services, and less time worrying about their networks.

SIMPLE, SCALABLE, EFFICIENT, SECURE DATA CENTER INTERCONNECT

- Simple rack-and-stack design
- Best plug-and-play capacity and reach
- Comprehensive automation support
- Zero-touch provisioning
- 10 GbE, 40 GbE, 100 GbE clients
- 1.2 Tb/s WDM super-channel output
- Scalability to 27.6 Tb/s per fiber
- Instant Bandwidth
- Compact, low power
- Built-in support for state-of-the-art data encryption (encryption software license required for activation)
- FIPS-140-2 Level 2 certified – Certificate Number: 3671





PURPOSE-BUILT FOR DATA CENTER INTERCONNECT

The Infinera CX Series is built for scale and simplicity as the industry’s only data center interconnect system based on super-channels and optimized for the cloud. A super-channel is an evolution in fiber optics communications in which several individual optical dense wavelength-division multiplexing (DWDM) channels are combined to create a composite signal of the desired capacity, provisioned in one operational cycle using only a single pair of optical fibers. Only Infinera has developed the advanced large-scale photonic integrated circuit (PIC) technology that is a key component in enabling super-channels. The PIC combines hundreds of discrete optical functions into a fingernail-sized chip, dramatically reducing the space and power requirements for transport networks. Infinera’s PIC technology has been proven in carrier networks for over a decade and has clocked more than two billion hours of reliable operation.

The latest generation of PIC technology is built into Infinera’s Infinite Capacity Engine, which delivers multi-terabit scale with high efficiency. The CX Series uses PIC technology, including the fourth-generation Infinite Capacity Engine (ICE4), to deliver simple, compact, rack-and-stack network appliances that can be deployed rapidly and easily, similar to the compute and storage domains of data centers. Provisioning is a simple three-step process that can be managed with a wide range of tools: direct command line interface (CLI), the preferred choice for many data center operators; the Infinera point-and-click network management system Digital Network Administrator (DNA); or API-driven SDN control, with standard protocols such as NETCONF and YANG. Support for zero-touch provisioning can even eliminate hands-on configuration completely. The PIC technology in the CX Series also enables Infinera’s Instant Bandwidth capability, which allows operators to rapidly add bandwidth in 100 gigabit per second (Gb/s) increments without having to deploy and install additional equipment after the initial installation.

THE INFINERA CX SERIES

The Infinera CX Series is purpose-built to handle massive traffic flows between metro data centers over WDM super-channels. Based on ICE4, it delivers multi-terabit super-channel scale and is optimized for scalable 100 GbE data center interconnect over a 1.2 terabit per second (Tb/s) super-channel output. Multiple CX platforms can be stacked and managed as a single node, delivering up to 27.6 Tb/s over a single fiber pair. The CX Series is designed to support in-flight wire-rate data encryption (encryption software license required for activation) to help ensure the security of all traffic as it travels between data centers. Learn more at www.infinera.com/products/cloud.



Simple: Rack, stack, provision in minutes



Data center automation



High efficiency
Low power



Built-in security
Designed to support in-flight encryption*



Unmatched choice and flexibility

*(Encryption software license required for activation)

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