ciena®

Giving Enterprises Critical Expressways to the Cloud

Multi-cloud adoption and migration of major workloads and datasets to the cloud is putting cloud connect networks under pressure. The good news for operators is that Coherent Routing offers a flexible, scalable, sustainable solution that enables enterprise customers to fuel their digital transformations with accelerated access to cloud infrastructure and services.

Migrating apps and workloads to the cloud is a key priority for a significant and growing percentage of organizations globally. This trend features large in the IDC DataSphere, which estimates data will double by 2026, representing a 2021-2026 CAGR of 21.2 percent, where data exceeded 100, 000EB (Exabytes) for the first time.[*]

This global 'rush to the cloud' creates significant challenges for service providers, who need to increase the performance and scale of their cloud connect networks exponentially in a very short timeframe.

Some have attempted this using IP/Optical convergence based on plugs in routers and a 'hop-by-hop' architecture that can potentially reduce management requirements and transport costs. However, while this approach is suitable for applications requiring simple point-to-point connectivity and moderate capacity demands, it is typically unable to support the flexible, any-to-any connectivity needed to quickly build out on-ramps to the cloud or provide high-speed connectivity between geographically distributed data centers.
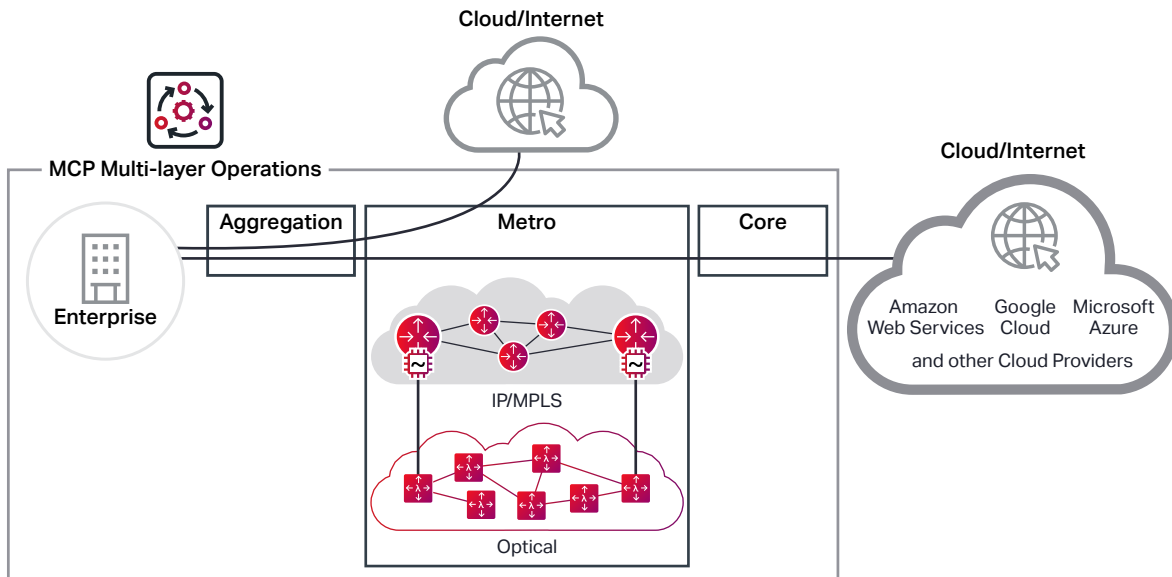
Ciena's end-to-end solution for 'any-to-any' connections

You can overcome these challenges with Ciena's Coherent Routing solution, with extensible, energy-efficient router platforms and high performance pluggable coherent optics. While similar solutions also offer IP/Ethernet and optical convergence, Ciena provides unprecedented multi-layer visualization and software control capabilities for cloud connect networks through its Manage, Control and Plan (MCP) software.

* Source: IDC, Worldwide IDC Global DataSphere Forecast, 2022-2026, May, 2022"

Use case benefits summary

- Flexible, any-to-any connectivity
- Rapid, efficient deployment of multiple expressways to the cloud
- Multi-layer network management and service assurance
- Simple, efficient troubleshooting across all layers
- Increased operating efficiency

With a single view across all network layers, including devices from third-party vendors, Communications Service Providers (CSPs) and operators can make changes quickly and accurately to meet customers' needs in particular geographies and proactively optimize services to ensure compliance with Service Level Agreements (SLAs).

By providing full visibility across all network layers, MCP allows you to quickly plan and deliver infrastructure rollouts closer to customers at the network edge, with the ability to model changes in a virtual environment before going live.

Multi-layer network management supports much more efficient troubleshooting and minimization of customer impacts, with correlation of service-disrupting faults from Layers 0 to 3 and quick identification of root causes. Advanced telemetry capabilities of the infrastructure are also leveraged by MCP to provide a comprehensive view of utilization across all network layers, indicating where there is capacity to deploy new services immediately, and where additional infrastructure or connections are needed to service customer requirements.

The result: Fast-track deployment

All of this helps to fast-track the deployment of multiple expressways to the cloud, while also helping to minimize network footprint, costs, and environmental impacts. The results are faster time to market for new revenue-generating services, improved customer experience, and reduced network management time and effort—all contributing to increased operating efficiency and competitive advantage.

> ### MCP—Gain insights
> **Download data sheet** →

> ### IP/Optical Convergence Success with Coherent Routing
> **Download infobrief** →

Driving the next wave of cloud adoption and innovation

The cloud is an exciting enabler for IT innovation, providing the vast processing power enterprises need to adopt high-bandwidth apps and services, including AI, machine learning, and IoT.

To help customers exploit the transformative power of the cloud, service providers need to build out scalable cloud on-ramps, with 'pay per hour' billing for companies migrating data and workloads to one or more cloud providers.

Additionally, highly scalable, and distributed cloud fabric is needed to enable enterprises to connect rapidly and seamlessly to multiple cloud providers. Service providers building this kind of infrastructure need immense scalability for any-to-any connections to ensure their customers can migrate data between cloud providers quickly in line with their multi-cloud strategies.

With Ciena's Coherent Routing solution for access, aggregation, and metro, you can rapidly plan, design, and

deploy a large number of high bandwidth routes to cloud services for your enterprise customers—with network troubleshooting and service assurance built in. With the flexibility and scalability to meet customers' cloud connect needs long term, Ciena positions you for success as the cloud market continues to expand.

Find out more

To learn more about Ciena's Coherent Routing and how it can help you build multiple expressways to the cloud for your enterprise customers to meet their multi-cloud adoption requirements, please contact us today for a meeting.

You can also find out more about our solutions here.

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