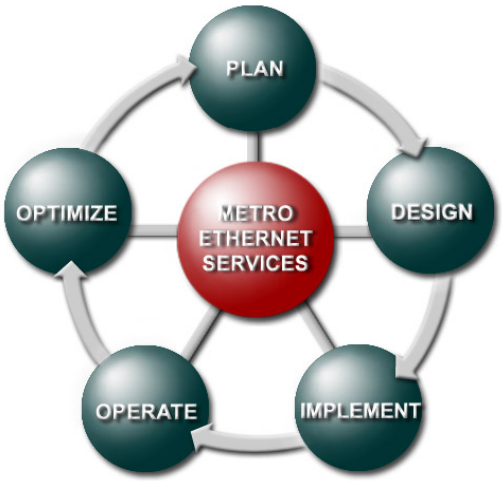
SERVICES OVERIVEW

# CISCO METRO ETHERNET SERVICES AND SUPPORT

**In the ever-changing communications market, incumbent service providers are looking for ways to grow revenue. One method is to deploy service provider Ethernet services priced to complement existing Frame Relay, ATM, and private-line services, with the intent of migrating medium and large customers from traditional data services so that average revenue per data subscriber increases. With more than 189,000 DS-3 and higher fiber connections in the United States, incumbent service providers can entice these subscribers to move to a flexible technology that offers bandwidth levels of 100BASE-T or Gigabit Ethernet at higher overall prices, but at a lower-price-per-bit.**




As with ATM and Frame Relay, carrier Ethernet services have generated strong interest from enterprises as a high-performing and cost-effective data-transport service. With bandwidth from 1 Mbps to 1 Gbps, these services have been deployed by competitive service providers and some incumbent providers. They are viewed as a means to deliver not only bandwidth, but also a pipe where several other services can be enabled: LAN-to-LAN services based on quality of service (QoS), storage management, Internet access, managed services, and VPNs.

Competitive carrier Ethernet services deployed in the last five years offered a price advantage as well as the opportunity for enterprises to obtain bandwidth with finer granularity. New Ethernet competitive providers offered service at lower prices to capture customers from the local regional Bell operating company (RBOC) sometimes at less-than-comparable RBOC DS-3 pricing for a 100-Mbps service. In response, incumbent providers delivered their own carrier Ethernet such as a Gigabit Ethernet metropolitan-area network (MAN) in select cities.

In building these networks, incumbent service providers deployed Ethernet switches using packet-over-SONET interfaces or ran Ethernet directly over dark fiber. Now that RBOCs have experience in deploying and pricing these services, they are in a position to expand deployment to a point where prices would be complementary with existing data services.

Customers want high-bandwidth services that fill the time-division multiplexing (TDM) bandwidth gaps. Even with attractive carrier Ethernet pricing from competitive carriers, enterprise customers have not broadly accepted these services. Attractive pricing, although a benefit, is only one reason for an enterprise to adopt a new service. High availability, footprint, and reliability are equally important.

Cisco® Metro Ethernet Services and Support have been introduced to help the service provider offer metropolitan (metro) Ethernet services. The Cisco Services and Support portfolio addresses tasks and deliverables throughout the network planning, design, implementation, operation, and optimization (PDIOO) lifecycle. The services also are complemented with knowledge transfer and mentoring services to help enable the service provider staff.

## CHALLENGES ADDRESSED WITH CISCO SERVICES AND SUPPORT FOR METRO ETHERNET

Despite a significant reduction in the complexity of delivering managed services on a Metro Ethernet infrastructure compared to a traditional service provider infrastructure based on optical, ATM, and routing layers, Metro Ethernet still provides a unique set of challenges.

Cisco Support Services for Metro Ethernet addresses the following challenges:

Technology challenges such as security considerations, convergence of advanced data, voice, and video services on a common platform (this often requires QoS), manageability of the infrastructure and of managed services, and development of designs that allow for efficient service and network management

Lifecycle challenges such as finishing the initial build phase of the Metro Ethernet network to begin the realization of revenue and thorough initial planning and design of a Metro Ethernet solution that that can scale without the cost of major redesigns

Market-specific challenges to develop and implement managed services, and get access to the required expertise to plan, design, implement, and operate a Metro Ethernet network infrastructure and the managed services running on it; migrating managed services and customers to the new Metro Ethernet infrastructure also is a challenge

Staff development and change management; Cisco Advanced Services knowledge transfer components can be used to assist operations staff in preparing for implementation of Metro Ethernet products and service offerings

## CISCO ADVANCED SERVICES FOR METRO ETHERNET

Cisco Advanced Services for Metro Ethernet is a comprehensive suite of services. The foundation for Cisco Advanced Services is a network lifecycle methodology based on the five basic phases of PDIOO.

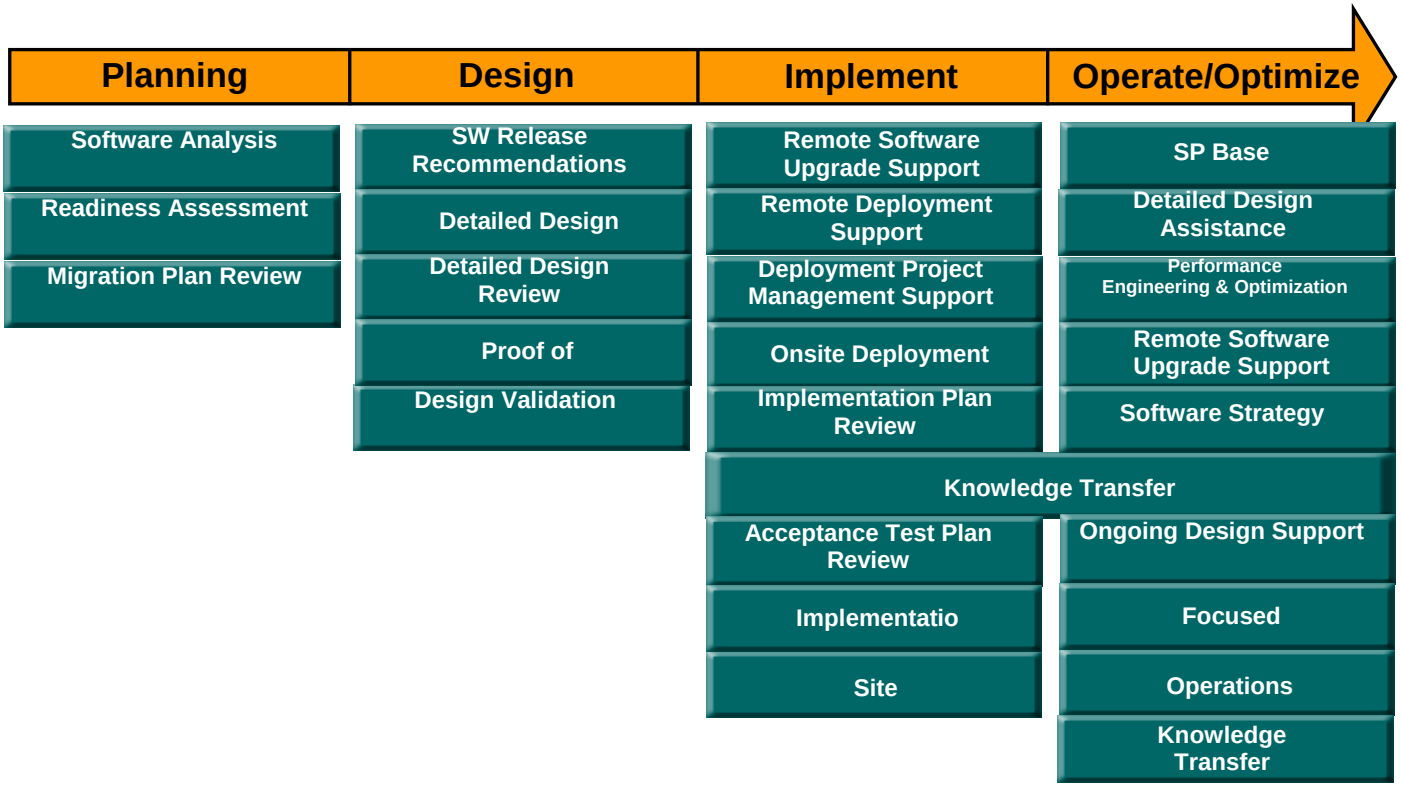
Cisco Advanced Services engineers have extensive experience in the lifecycles of various Metro Ethernet solutions, improving the value of the PDIOO deliverables through intellectual property documented as best practices, lessons learned, scalability testing and results, traffic engineering, and software strategies.

Cisco Advanced Services also can provide knowledge transfer through the delivery of courses available for Metro Ethernet. The courses can be delivered through a regularly scheduled class taught either to a varied audience or specifically to the service provider, or through custom course work targeted at the specific service provider's knowledge transfer needs.

Service providers face the challenges of integration, migration, and optimization of their Metro Ethernet environment. Cisco experience can provide the support and guidance required to help ensure the effective migration of managed services and customers to the new platform and also to help ensure that the network design meets the service providers' scalability needs. The application of Cisco best practices in design and implementation will result in lower cost of ownership and faster service adoption for the service provider.

Throughout the network lifecycle, from the build phase through basic operational support, Cisco Systems® can add its expertise in project management and, where necessary, manage work that has been outsourced to partners. Cisco operational support is further enhanced by existing Cisco Advanced Services in the areas of software strategy, network extensions, and optimization.

**Figure 1 Cisco Support Services for Metro Ethernet**



## ADVANTAGES AND BENEFITS OF CISCO SUPPORT SERVICES FOR METRO ETHERNET

The advantages of using Cisco Support Services for Metro Ethernet include the following:

- Helps ensure that your architecture goals are consistent with your business goals
- Reduces your network build (plan, design, and implementation) risk using Cisco engineering and implementation experience in the emerging Metro Ethernet market
- Raises the expectation of the launch of services with an efficient operational architecture using Cisco experience and expertise in leading technologies and best practices
- Increases the knowledge base and experience of your resources through knowledge transfer services that take advantage of experienced Cisco engineers and provide formal advanced technology education
- Profits from the robust Cisco PDIOO lifecycle, significantly increasing the probability of success with embedded milestone reviews that help ensure that important deliverables are met and gaps are minimized
- Helps ensure a cost-effective operational environment designed into your project plans and uses extensive Cisco operational experience to help ensure ongoing efficiency and optimization of your operations
- Successfully manages the high growth of a variety of services that integrate both voice and data, supported by complex Metro Ethernet technologies and evolving IP technologies
- Uses Cisco Metro Ethernet Services delivery flexibility, so your resources can deploy technologies and solutions faster and with less potential risk

The benefits of using Cisco  Support Services for Metro Ethernet include the following:

- Accelerates your success in this market segment and accelerate your time to profitability
- Lowers implementation and migration costs and risks
- Reduces operational expenses and reduces the cost of employee turnover through the transfer of knowledge gained from experienced Cisco engineering resources
- Improves return on investment in partner services

## ENGAGEMENT

Cisco Support Services for Metro Ethernet offers a comprehensive suite of service offerings that can be delivered through a flexible engagement process.  Flexibility allows for the delivery of Cisco Advanced Services in varying levels of support:  Advisory—where Cisco advises customers, and Cisco led—where Cisco takes a leadership role in owning the development and implementation of support.  Cisco Support Services for Metro Ethernet offers Cisco service provider customers direct engagement models or engagement models collaborating with Cisco partners.

## HOW TO ORDER

Contact your Cisco service account manager to purchase Cisco Support Services for Metro Ethernet. Your Cisco service account manager is best positioned to evaluate your needs based on your service requirements and can establish the services most suitable for your environment.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