

## Cisco Services for Carrier Ethernet

### Services Designed to Improve Network Efficiency and Operations Give Cisco the Confidence to Offer Custom-Scoped Network Availability Service Level Agreements

In the ever-changing communications market, service providers are looking for ways to increase 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, 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. 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.

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® Carrier Ethernet Services have been introduced to help the service provider offer Ethernet services. The Cisco Services portfolio addresses tasks and deliverables throughout the network prepare, plan, design, implementation, operation, and optimization (PPDIOO) phases of the lifecycle. The services also are complemented with knowledge transfer and mentoring services to help enable the service provider staff.

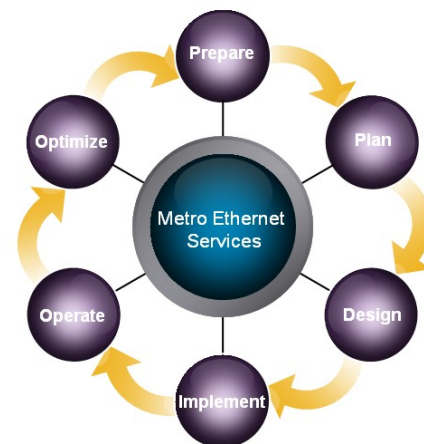
### Challenges Addressed with Cisco Services for Carrier Ethernet

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

Cisco Services for Carrier 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 Carrier Ethernet network to begin the realization of revenue and thorough initial planning and design of a Carrier Ethernet solution 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 prepare, plan, design, implement, operate, and optimize a Carrier Ethernet network infrastructure and the managed services running on it; migrating managed services and customers to the new Carrier 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 Carrier Ethernet products and service offerings



### Cisco Advanced Services for Carrier Ethernet

Cisco Advanced Services for Carrier Ethernet are a comprehensive suite of services. The foundation for Cisco Advanced Services is a network lifecycle methodology based on the six basic phases of PPDIIO.

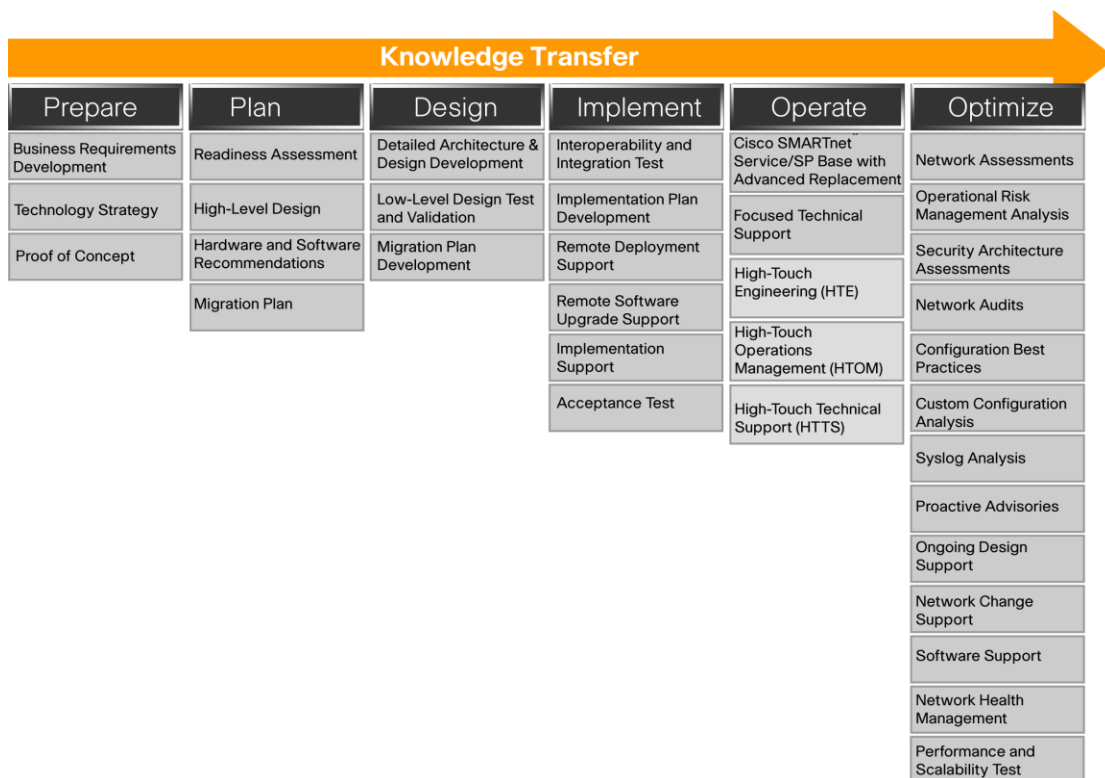
Cisco Advanced Services engineers have extensive experience in the lifecycles of various Carrier Ethernet solutions, improving the value of the PPDIIO deliverables through intellectual property documented as best practices, lessons learned, scalability testing and results, traffic engineering, and software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

Cisco Advanced Services also can provide knowledge transfer through the delivery of courses available for Carrier 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 Carrier 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 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.

In collaboration with Cisco Advanced Services, customers are able to implement operational best practices and maintain a network with a high degree of availability backed by a service level agreement (SLA). The suite of lifecycle services enables optimized network performance and operational efficiencies.



**Figure 1 Cisco Services for Carrier Ethernet**

### Advantages and Benefits of Cisco Services for Carrier Ethernet

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

- Helps ensure that your architecture goals are consistent with your business goals
- Reduces your network build (prepare, plan, design, and implementation) risk using Cisco engineering and implementation experience in the emerging Carrier 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 PPDIOO 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 Carrier Ethernet technologies and evolving IP technologies
- Uses Cisco Carrier Ethernet Services delivery flexibility, so your resources can deploy technologies and solutions faster and with less potential risk

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

- Accelerates your success in this market segment and 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

By supporting your Carrier Ethernet network with Cisco Services, you can also obtain a network availability SLA that mitigates risk and assures operational availability.

## Engagement

Cisco Services for Carrier Ethernet provide 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 Services for Carrier Ethernet offer Cisco service provider customers direct engagement models or engagement models collaborating with Cisco partners.

## How to Order

To purchase Cisco Services for Carrier Ethernet, contact your Cisco service account manager. 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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