



## Service Overview

# Cisco Lifecycle Services for Cisco Optical Network Systems

## SUMMARY

Cisco® Lifecycle Services for Cisco optical network systems are designed to facilitate adoption of Cisco ONS family products into the customer environment. Cisco Lifecycle Services for the enterprise deliver rapid deployment services such as planning, design, implementation, and optimization. By employing the best practices and expertise of Cisco Advanced Services engineers, enterprise customers receive consistent, high-quality service from Cisco Systems® and its best-in-class service partners. This approach reduces risk and accelerates adoption of Cisco ONS family solutions, and helps deliver the optimal network performance that enterprises require to stay competitive.

## WHY CISCO?

Cisco Advanced Services engineers typically hold Cisco CCIE® certification or Cisco Optical Specialist certification and they specialize in optical and Cisco Transport Manager application technologies. They have direct experience in planning, designing, and supporting Cisco optical technologies on myriad large-scale networks in both large enterprise and service provider WAN infrastructures. Their product and technology expertise is constantly enhanced by hands-on experience with real-life networks and broad exposure to the latest technology and implementations. With the help of specialized tools, regular quarterly site visits, weekly status conference calls, and continuous communication, Cisco Advanced Services engineers build an in-depth knowledge of optical infrastructure and application performance requirements and business objectives. This knowledge helps them to become a highly effective liaison between your organization and the wealth of technical expertise and intellectual property at Cisco.

## BUSINESS BENEFITS

Cisco Lifecycle Services are tailored to meet customers' specific requirements. Services include planning and design assistance, detailed design development and reviews, as well as implementation and migration assistance. These services are designed to help customers plan the infrastructure that addresses their specific application requirements including assistance installing and configuring Cisco Transport Manager. Cisco offers both transactional (statement of work [SOW]-based) and subscription (fee-based) services to provide maximum flexibility to customers to aid in their deployments, upgrades, additions and ongoing optimizations. Transactional service deliverables can be customized to fit different types of customer environments whereas subscription services are priced for various installed base sizes and provide set deliverables.

## Transactional Services for Cisco Optical Network Systems

Transactional services for Cisco optical network systems are designed so that customers can select the services and deliverables they need to meet their unique requirements. This approach provides maximum flexibility while delivering a breadth of services. Tables 1 through 6 summarize the primary transactional services offered by Cisco in support of Cisco optical network system deployments.

**Table 1.** Site Readiness Assessment

Activities and Deliverables	Benefits
<p>The Site Readiness Assessment details the physical, electrical, and environmental requirements necessary for the optical solution to be implemented. This service provides a comprehensive understanding of equipment deployment requirements and site details for electrical and environmental requirements.</p> <p><b>Deliverables</b> Site Survey Report</p> <p><b>Activities</b></p> <ul style="list-style-type: none"> <li>• Produce Site Requirements Specification, assessing and documenting the physical, electrical, and environmental specifications for each required network element.</li> <li>• List all networking and application devices to be implemented.</li> <li>• Survey all environmental and physical details of specified sites.</li> <li>• Assess and document gaps in requirements between Site Requirements Specification and Site Survey.</li> <li>• Make recommendations related to these gaps.</li> <li>• Present and discuss the Site Survey, Site Requirements Specification, and recommendations.</li> </ul>	<ul style="list-style-type: none"> <li>• Accelerates the successful implementation of advanced optical technologies by helping to ensure that the customer's Site Requirements Specification is complete and contains the critical elements required for installation of optical equipment.</li> <li>• Helps prevent disruption to the customer's network deployment by identifying potential risks.</li> <li>• Helps to identify potential shortcomings of the customer's facility and allows for proactive resolution prior to the network implementation.</li> </ul>

**Table 2.** Security Vulnerability Assessment

Activities and Deliverables	Benefits
<p>This service component assesses optical network system security performance; measures security trends and exceptions related to security policy, procedures and user access; performs an audit of intrusion-detection data, and provides recommendations for improvement.</p> <p><b>Deliverables</b> Security Assessment Report</p> <p><b>Activities</b></p> <ul style="list-style-type: none"> <li>• Conduct a planning meeting to set expectations and milestones and to define deliverables.</li> <li>• Define criteria for network security optimization including utilization, fault conditions, error thresholds, and throughput.</li> <li>• Collect and analyze data for trends and exceptions that may impact network security.</li> <li>• Monitor and inspect security logs to trend usage of systems and suspicious activity.</li> <li>• Review network security component placement and configuration for optimal load distribution and traffic management.</li> <li>• Assess security performance against established criteria.</li> <li>• Provide impact analysis of new software versions, features, and configurations.</li> <li>• Provide hardware and software recommendations to optimize system and network performance.</li> <li>• Provide recommendations for network and security component tuning including system optimization, filtering, route redistribution, trunk and port configuration, and protocol, policy, and feature configuration.</li> <li>• Identify and measure the optical network security system for trends and exceptions related to security policy, procedures, and user access.</li> <li>• Assess the (advanced technology) security system performance against the established baseline and analyze for areas of improvement.</li> <li>• Analyze access-control policies and make recommendations for improvement.</li> <li>• Develop a Security Assessment Report highlighting recommendations for improving security.</li> <li>• Present and review Security Assessment Report.</li> </ul>	<ul style="list-style-type: none"> <li>• Security experts offer knowledge and expertise to help optimize your security infrastructure.</li> <li>• Reduces operating costs by enhancing optical network infrastructure efficiency, reliability, and performance.</li> <li>• Helps proactively identify and resolve potential network exposures before they become major network issues.</li> <li>• Improves the security of corporate information assets by measuring security system performance for trends and exceptions related to corporate security policy and procedures.</li> <li>• Improves your company's ability to mitigate intrusion attempts by regularly auditing intrusion-detection data to reveal anomalous network and host events and to build a forensic "fingerprint" of an attack.</li> <li>• Mitigates virus infiltration and accidental insider abuse of network access by analyzing access control policies and recommending improvements.</li> </ul>

**Table 3.** Detailed Design Development

Activities and Deliverables	Benefits
<p>Provides a comprehensive, implementation-ready detailed design for the optical network solution. Derives the design from availability, capacity, reliability, security, scalability, and performance specifications that align with your business and technical requirements.</p> <p><b>Deliverables</b> Low-Level Design document</p> <p><b>Activities</b></p> <ul style="list-style-type: none"> <li>• Examine and evaluate customer network documentation, and existing network designs.</li> <li>• Verify that the chosen optical platforms, features, and functionality will meet the design objectives.</li> <li>• Perform design activities including bandwidth modeling, capacity planning, WAN analysis, architecture review, network element naming and IP addressing, scalability and redundancy assessment, and security assessment.</li> <li>• Complete the detailed design discovery checklist, where applicable, to integrate technical requirements and design goals into the low-level design.</li> <li>• Develop and present the Low-Level Design document.</li> </ul>	<ul style="list-style-type: none"> <li>• Minimize expensive, time-consuming, network-intrusive redesign by establishing a well-engineered detailed design early in the optical network lifecycle.</li> <li>• Accelerate the adoption of new technologies and the return on the customer's investment in Cisco optical solutions by integrating the customer's technical requirements and business goals into a detailed optical design.</li> <li>• Bridge the customer's expertise gap and accelerate the customer's learning curve in adopting new technologies and products by transferring knowledge throughout the design development process.</li> <li>• Establish the groundwork for improving network resiliency, availability, and security by specifying the correct hardware and software features and functionality.</li> <li>• Improve the customer's staff proficiency by providing continuous knowledge exchange throughout the design development process.</li> <li>• Improve performance, resiliency, and availability in the customer's network by using the correct set of hardware, OS software releases, and hardware/software features and functionalities.</li> </ul>

**Table 4.** Detailed Design Validation

Activities and Deliverables	Benefits
<p>This service validates that the customer's detailed design meets business and technical requirements and is implementation-ready. The service includes test plan development and execution of software applications, optical transport features, functionality, and interoperability.</p> <p><b>Deliverables</b> Detailed Design Test Plan</p> <p><b>Activities</b></p> <ul style="list-style-type: none"> <li>• Develop test plans for hardware qualification, design validation (of hardware and software), software upgrades, and application software.</li> <li>• Verify that Detailed Design Test Plan includes feature requirements and software application requirements.</li> <li>• Execute tests identified in the Detailed Design Test Plan and capture test results.</li> <li>• Present test results. Determine how the test results impact the detailed design (if necessary), and incorporate any recommended changes back into the design process.</li> </ul>	<ul style="list-style-type: none"> <li>• Accelerate adoption of your new system or solution by validating that your design meets end-user service delivery goals.</li> <li>• Reduce costly delays and rework when implementing and operating the system or solution by refining the design as necessary prior to implementation.</li> </ul>

**Table 5.** Migration Plan Development

Activities and Deliverables	Benefits
<p>Provides a plan that details the information necessary to complete the migration of existing optical network service(s) and technologies to the proposed optical network architecture.</p> <p><b>Deliverables</b> Migration Plan Document</p> <p><b>Activities</b></p> <ul style="list-style-type: none"> <li>• Analyze customer capabilities, features, and functionality of the existing and proposed optical network and services.</li> <li>• Analyze optical design requirements.</li> <li>• Identify which network services need to be migrated.</li> <li>• Define optical migration and integration strategy, detailed tasks, and procedures.</li> <li>• Identify optical migration team roles and responsibilities.</li> <li>• Determine optical component configurations (procedures).</li> <li>• Develop optical migration tests.</li> </ul>	<ul style="list-style-type: none"> <li>• Helps minimize risk by providing a network migration plan that is developed by optical network technology experts.</li> <li>• Enhances customer knowledge and understanding associated with the migration of network services, interfaces, and hardware platform requirements by utilizing optical subject matter experts and industry best practices.</li> <li>• Helps maximize network performance and reliability.</li> <li>• Helps to accelerate migration, improve efficiency, and reduce costly delays in the migration process.</li> </ul>

Activities and Deliverables	Benefits
<ul style="list-style-type: none"> <li>Estimate outage/unavailability potential for each component migration and define associated failure-recovery procedures.</li> <li>Determine interconnection and interoperability requirements.</li> <li>Present a migration plan that includes Low-Level Design overview and physical and logical network topology.</li> </ul>	

**Table 6.** Cisco Optical Network System Implementation

Activities and Deliverables	Benefits
<p>This service component is a collaborative effort between the customer, Cisco, and the certified Cisco partner that installs, configures, and integrates new optical transport system components as specified in the customer's Implementation Plan. Predefined test cases are conducted and all network components, devices, and applications are documented. Implementation activities may include:</p> <p><b>Project Management:</b></p> <p><b>Deliverables</b> Project Plan</p> <p><b>Activities</b></p> <ul style="list-style-type: none"> <li>Conduct project kick-off and reoccurring status meetings.</li> <li>Update project schedule.</li> <li>Establish roles and responsibilities.</li> <li>Perform periodic review of third-party SOW contracts.</li> <li>Perform Milestone Customer Satisfaction Surveys.</li> <li>Issue Milestone Sign-Off Certificates and approve third-party partner invoices.</li> </ul> <p><b>Optical Network System Deployment:</b></p> <p><b>Deliverables</b> Implementation Report</p> <p><b>Activities</b></p> <ul style="list-style-type: none"> <li>Optical network system installation and configuration.</li> <li>Verify received equipment against Bill of Materials (BOM).</li> <li>Catalogue, tag, and add components, devices, and applications to customer's inventory.</li> <li>Assemble system components.</li> <li>Perform basic out-of-box testing to verify that all units power up correctly and there are no hardware faults.</li> <li>Install hardware and software.</li> <li>Complete cabling and other physical connectivity.</li> <li>Verify all hardware/software versions and upgrade, as appropriate.</li> <li>Configure third-party components.</li> <li>Configure hardware and software.</li> <li>Commission optical network system.</li> <li>Test system connectivity.</li> <li>Compile as-built documentation.</li> <li>Describe the network implementation at a high level.</li> <li>Assess the compliance of implementation elements to existing design parameters and the completeness of implementation.</li> <li>The conformance of the implementation to Cisco leading practices</li> <li>Describe new features and functionality, configuration changes, etc.</li> <li>Recommend changes to the existing network implementation, where applicable.</li> <li>Present Implementation Report.</li> </ul> <p><b>Network Operations Deployment:</b></p> <p><b>Deliverables</b> installation of Cisco Transport Manager and Cisco Transport Controller Element Management System (EMS)</p> <p><b>Activities</b></p> <ul style="list-style-type: none"> <li>Configure, test, and commission network element management functionality in accordance with the Operations Implementation Plan.</li> <li>Implement a technical strategy for integrating an optical transport domain</li> </ul>	<ul style="list-style-type: none"> <li>Minimizes deployment risks through best practices and lessons learned from prior Cisco Advanced Services deployments.</li> <li>Provides assistance in escalating any issues pertaining to Cisco products.</li> <li>Provides an opportunity to benchmark the customer's existing practices against the Cisco Advanced Services project management framework, templates, and tools to help realize any potential for improvement.</li> <li>Provides access to project managers with diverse skill sets who can help increase your optical solution's business value from the executive level to the network support staff level.</li> <li>Assists with risk-management assessment related to design, implementation, and operation.</li> <li>Identifies risks and provide easy transition to additional Advanced Services as needed.</li> <li>Helps customers successfully deploy optical network system components by following an in-depth, detailed implementation process based on leading practices.</li> <li>Helps customers achieve business and technical goals by implementing new system in accordance with recommendations made in the earlier phases of the Prepare, Plan, Design, Implement, Operate, and Optimize (PPDIOO) lifecycle.</li> <li>Develops an implementation plan based on the PPDIOO process. This provides better understanding of the implemented optical transport solution.</li> <li>Benefits from expert review and advanced Implementation Plan development so that technical details are properly specified and implemented correctly based on established acceptance criteria.</li> <li>Expedites readiness of network operations and optical network system integration.</li> <li>Increases staff response time to reduce mean time to repair (MTTR) and improve network availability through improved understanding of optical transport technology.</li> <li>Prepares network operations for future growth and scalability.</li> <li>Creates automation opportunities for high-demand, repeatable tasks, leading to productivity gains.</li> <li>Increases customer satisfaction through greater network reliability and availability.</li> <li>Improves an organization's readiness to support new technologies and services.</li> <li>Shortens response time to operational problems.</li> <li>Optimizes operating expenses and minimizes network outages.</li> <li>Enhances ROI by helping customers benefit from new technology sooner.</li> </ul>

Activities and Deliverables	Benefits
manager (Cisco Transport Manager) into the customer's OSS. <ul style="list-style-type: none"> <li>Review procedures for monitoring and maintaining operational integrity of optical transport power budgets, DWDM, SDH/SONET, and data circuit provisioning.</li> <li>Ascertain needs for addressing higher-level application requirements.</li> </ul>	

### Subscription Services for Cisco Optical Network Systems

Cisco offers network optimization services (NOS) for optical network systems. This annualized subscription service provides support for Cisco ONS solutions and addresses ongoing requirements in a post-sales environment. Tables 7 through 11 summarize the deliverables offered by this service. Customers may also choose to purchase these deliverables separately as transactional engagements.

**Table 7.** Design Support

Activities and Deliverables	Benefits
<ul style="list-style-type: none"> <li>Cisco Advanced Services engineers provide a combination of onsite and remote support to address customers' ongoing requirements for design of Cisco ONS devices in an operating environment. Support associated with this service typically includes:               <ul style="list-style-type: none"> <li>Detailed design report</li> <li>Design consultation</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Promotes design consistency.</li> <li>Promotes continuity in design development within a consistent framework to help ensure that business and technical requirements are met.</li> <li>Facilitates integration of new devices through the use of a consistent structure and set of methodologies.</li> <li>Easier manageability due to consistency of design.</li> </ul>

**Table 8.** Performance Engineering and Optimization

Activities and Deliverables	Benefits
Customers often make changes to their live environments, and many of these changes are evolutionary. These environments benefit from ongoing optimization to achieve the maximum ROI. This service provides: <ul style="list-style-type: none"> <li>Performance Engineering and Optimization report</li> </ul>	<ul style="list-style-type: none"> <li>Collects useful data to better understand the operating environment</li> <li>Provides insight into the performance data and the tuning parameters needed to achieve the desired metrics</li> </ul>

**Table 9.** Software Strategy

Activities and Deliverables	Benefits
This service helps customers accommodate any changes to their software requirements. It typically provides the following deliverables: <ul style="list-style-type: none"> <li>Software Strategy Update report</li> <li>Software Recommendation report</li> <li>Software Infrastructure Analysis report</li> <li>Proactive Critical Bug Analysis report</li> <li>Software Security Alert report</li> </ul>	<ul style="list-style-type: none"> <li>Provides version control to reduce the risk of adopting new features, and minimizes instability in the operating environment.</li> <li>Proactively manages bugs to preempt any problems.</li> <li>Proactively manages any potential problems in the live network environment.</li> </ul>

**Table 10.** Knowledge Transfer and Mentoring

Activities and Deliverables	Benefits
This service provides the following support: <ul style="list-style-type: none"> <li>Ongoing knowledge transfer and mentoring</li> </ul>	<ul style="list-style-type: none"> <li>Gives you access to subject matter experts to train operation staff</li> <li>Provides access to the expertise of engineers who have experience in deploying Cisco ONS solutions at other customer sites</li> <li>Gives you access to Cisco resources and libraries</li> </ul>

**In addition to the services outlined above, the complete suite of Cisco Lifecycle Services is delivered in a framework consisting of six phases: prepare, plan, design, implement, operate, and optimize (PPDIOO). Based on unique customer situations, a customized set of services may be needed to meet specific customer requirements.**

## CISCO ONS TECHNOLOGIES AND PRODUCTS

Cisco Advanced Services for Cisco ONS family products can help customers plan a highly efficient, cost-effective, consolidated network and application infrastructure. Customers can plan for and deploy a centralized management system and protect their data without compromising performance. Cisco services facilitate access to applications, rich media, and file content at the branch office and help consolidate branch servers in the data center. These services support the following products:

- Cisco ONS 15216 Metropolitan/Regional DWDM System
- Cisco ONS 15454 Multiservice Provisioning Platform (MSPP)
- Cisco ONS 15300 Series multiservice platforms
- Cisco ONS 15500 Series DWDM platforms
- Cisco ONS 15600 Series MSPP and Multiservice Switching Platform (MSSP)

## FOR MORE INFORMATION

For more information about Cisco Services for optical network systems, contact your local Cisco account representative.



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