



Service Description: Cisco SON Optimization Support Service

This document describes Cisco's Self Organizing Network (SON) Optimization Support Service.

Related Documents: This document should be read in conjunction with the following documents also posted at www.cisco.com/go/servicedescriptions/: (1) Glossary of Terms; (2) List of Services Not Covered; and (3) Severity and Escalation Guidelines. All capitalized terms in this description have the meaning ascribed to them in the Glossary of Terms.

Direct Sale from Cisco. If you have purchased these Services directly from Cisco, this document is incorporated into your Master Services Agreement (MSA) or equivalent services agreement executed between you and Cisco. In the event of a conflict between this Service Description and your MSA or equivalent services agreement, this Service Description shall govern.

This Cisco SON Optimization Support Service is intended to supplement a current support agreement for Cisco products and is only available where all Product(s) in Customer's Network is supported by Cisco's Foundation Technology Service Provider Optimization Service. Cisco shall provide the SON Optimization Support Services described below as selected and detailed on the Purchase Order for which Cisco has been paid the appropriate fee. Cisco shall provide a Quote for Services ("Quote") setting out the extent of the Services and duration that Cisco shall provide such Services. Cisco shall receive a Purchase Order that references the Quote agreed between the parties and that, additionally, acknowledges and agrees to the terms contained therein. Availability of Services described herein and service delivery may vary by geographical region.

Cisco SON Optimization Support Service

Service Summary

Cisco SON Optimization Support Services provides Mobile Wireless-specific help for your SON Network support staff in the form of Solution Planning and Design Support, Solution Health Checks and Continuous Learning service modules.

Services performed under this Service Description that are comparable to those services performed under Cisco's Foundation Technology Service Provider Optimization Service will build upon the original service support therein and will be focused on the specific technology described in this Service Description.

Cisco Responsibilities

Cisco's SON Optimization Support Service consists of the provision of, at a minimum, Design Support, from the Services described below, which Cisco shall provide for the Customer's Network during Standard Business Hours (unless stated otherwise). Cisco shall provide the following General Support provisions for all Services selected by Customer under the Cisco SON Optimization Support Service:

General Support

- Designate an engineer ("Cisco SON Network Consulting Engineer") to act as the primary interface with the Cisco project manager appointed for the Customer.
- Participate in regular visits to the Customer as required by the project manager either via phone or in-person to review proactive deliverables and activities and to plan for next quarter. Additional visits will be mutually agreed at Cisco's then-current travel and labor rates.
- Designate engineer(s) to work with the Cisco project management and the primary Cisco SON Consulting Engineer.
- Participate in periodic conference calls (usually weekly) to review Customer's Network status, planning and the Services being provided.
- Monitor a Customer-specific Cisco email alias to facilitate communication with primary Cisco SON Network Consulting Engineer as well as the engineers on the Cisco's SON support team.
- Cisco SON Consulting Engineer may utilize Customer provided data, scripts or internal tools to assist in collecting data from the Network.

Solution Planning and Design Support

- **SON Design Review and Support**
 - Consult with Customer RAN Operations and networking staff in a series of meetings to develop a thorough understanding of Customer's SON requirements.
 - Provide detailed design support for additional SON Module Implementation with recommendations which may include the following:

- Customer's expansion / enhancement requirements for SON.
 - Customer's design requirements, priorities, and goals.
 - Analysis of impact of new requirements on existing Network.
 - Architecture and topology for the Network.
 - Feature selection and configuration.
 - Security considerations.
 - High level design overview and scope of the implementation
 - SON Network Topology and server deployment plan per operator data center and OSS connectivity.
 - High-level scope of testing including the specific set of procedures and/or tests developed by Cisco's Advanced Services team.
- **SON New Market Expansion Support**
 - Collaborate with Customer and provide support for activities for new network elements due to addition of major market segment in SON to support acquisitions or expansions
 - **SON Neighbor Optimization Support**
 - Support Customer's New Cell Site Neighbor Planning in SON APO Module and fine tune parameters
 - On-going optimization of SON ANR module policy parameters
 - Keeping track of the RAN activities related to new network elements
 - **SON Resource Balancing Support**
 - Support RAN balancing across layers and sites by SON's ICLB/DLB modules previously acquired by Customer.
 - Support Customer with resource balance and management between technologies, on different cells and layers across same technology to reduce the congestion and improve the RAN KPIs by SON's IRLB modules previously acquired by Customer.
 - Provide Cell Reports for High Triggers on Non-HS/HS Power Utilization, Code and UL H/W to isolate congested cell.
 - **SON Scheduled Event/Venue Support**
 - Pro-active support for Customer activities for SON Optimization, deployed at Customer network related to Venue / Special Events application modules.
 - Provide pro-active support for Network Freeze / rehome and any other major scheduled RAN activity for SON
- SON MEH Module configuration support for events and venues.
 - **SON Onsite Support**
 - Where available, an on-site Cisco SON SME will be provided to mutually agreed hours/days to pro-actively support Customer's SON activities.
 - Operational activity support such as Rehome/OSS migration/Femto retune/Frequency retune
 - Optional pro-active remote support to complement on-site Cisco SON SME can be provided:
 - SON server performance and KPI analysis
 - Escalations and event Handling
 - Server Health Checks
 - Trouble Shooting / Root-Cause Analysis
 - **SON Major Software Upgrade Support**
 - Provide remote or optional onsite support for activities related to Customer's major upgrade of SON software for specified duration.
 - Provide remote or optional onsite support for activities related to Customer's Major RAN upgrade to make sure SON release compatibility.
 - Provide remote support for the activity if SON server operating system or SON server database upgrade
 - **SON Minor Software Upgrade Support**
 - Provide remote support for activities related to Customer's Minor upgrade of SON software for specified duration. Provision of Software Release(s) are not a part of this Service and must be purchased separately by Customer or received under a separate service contract.

Solution Health Checks

- **SON KPI Audit and Recommendations**
 - Top Offender Analysis & Recommendations
 - Cisco will generate monthly reports for top offenders with highest drop-call rate (DCR)
 - Optimize SON settings for these offenders to get KPI improvements
 - Recommend preliminary solutions to customer for these top offenders
 - SON Reports: KPI/boomer/Co-Sc Report
 - Boomer and PSC collision reports will be provided based on Customer's request
 - Activity report for application to show SON actions
 - KPI Metrics for RNCs and Network level
 - Count of new cell neighbor activity by SON

- **SON Performance Audit & Recommendations**

- Performance audit of the SON server
 - Health Checks for SON servers related to CPU and memory consumption
 - Providing recommendation to mitigate performance issues on SON servers to avoid downtime
 - Review and monitor the load on the servers and in relation with any major network growth
 - SON parameter audit – to make sure SON parameters comply with Customer's requirements.

Continuous Learning

- **Knowledge Transfer and Mentoring.**

- Provide informal technical update training such as a "chalk talk" on a topic that is mutually agreed upon and relevant to the Products and Cisco technologies. Such training would be provided by the Cisco SON Network Consulting Engineer or another senior Cisco engineer.

Customer Responsibilities

- **General Responsibilities**

- Designate at least two (2) but not more than six (6) technical representatives in each area covered under SON, who must be Customer's employees in a centralized Network support center (Customer's technical assistance center), to act as the primary technical interface to the Cisco SON Network Consulting Engineer(s). Customer will designate as contacts senior engineers with the authority to make any necessary changes to the Network configuration. One individual, who is a senior member of management or technical staff, will be designated as Customer's primary point of contact to manage the implementation of services selected under this Service Description (e.g., chair the weekly conference calls, assist with prioritization of projects and activities).
- Customer's technical assistance center shall maintain centralized network management for its Network supported under this Service Description, capable of providing Level 1 and Level 2 support.
- Provide reasonable electronic access to Customer's Network to allow the Cisco SON Network Consulting Engineer to provide support.
- If Cisco provides Data Collection Tools or scripts located at Customer's site, Customer shall ensure that such Data Collection Tools or scripts are located in a secure area, within a Network

environment protected within a firewall and on a secure LAN, under lock and key and with access restricted to those Customer employee(s) or contractor(s) who have a need to access the Data Collection Tools and/or a need to know the contents of the output of Data Collection Tools. In the event Data Collection Tool provided by Cisco is Software, Customer agrees to make appropriate computers available and download Software as needed. Customer shall remain responsible for any damage to or loss or theft of the Data Collection Tools while in Customer's custody.

- Provide a Network topology map, configuration information, and information of new features being implemented as needed.
- Notify Cisco SON Network Consulting Engineer of any major Network changes (e.g., topology, configuration, new OSS / RAN software releases.).
- In the event the Network composition is altered, after the Services selected under this Service Description have become effective, Customer is responsible to notify Cisco in writing within ten days (10) of the change. Cisco may require modifications to the fee if the Network composition has increased beyond the original pricing quote for Services.
- Create and manage an internal email alias for communication with Cisco SON Network Consulting Engineer.
- Retain overall responsibility for any business process impact and any process change implementations.
- Customer should respond to all of the Cisco requests or queries within 5 business days
- Customer should provide access to internal RAN performance monitoring tools.

Solution Planning and Design Support

In addition to the General Responsibilities, Customer shall provide the following:

- **SON Design Review and Support**

- Ensure key detailed design stakeholders and decision-makers are available to participate during the course of the service.
- Provide or extract additional information required in the design effort. (e.g., OSS connectivity parameters and bandwidth requirements).

SON New Market Expansion Support

- Collaborate and work with Cisco SON Networking Consulting Engineer for new network elements due to addition of major market segment in SON.

SON Neighbor Optimization Support

- Customer will provide all relevant details to Cisco SON NCE about New site/cell launches in advance
- Review recommendations on new neighbor list optimization with Cisco and implement them in SON

SON Scheduled Event/Venue Support

- Provide all details of related to SON optimization of scheduled event to Cisco at least 30 days in advance
- Review and finalize needed support for SON Optimization for scheduled event at least 10 working days in advance.

SON Major Software Upgrade Support

- Provide and discuss all the plans and details of upcoming Major Software Upgrade of SON software with Cisco SON engineer in advance.
- Provide all the relevant details on the SON Server and related systems to Cisco SON Engineer

SON Minor Software Upgrade Support

- Provide and discuss all the plans and details of upcoming Minor Software Upgrade of SON software with Cisco SON engineer in advance.
- Provide all the relevant details on the SON Server and related systems to Cisco SON Engineer

Solution Health Checks

SON KPI Audit and Recommendations

- Review KPI Audit and Recommendation report with Cisco SON Engineer and define action plan to mitigate identified offenders.

SON Performance Audit & Recommendations

- Review SON Server performance audit results with Cisco and implement changes recommended by Cisco Advanced Services

Continuous Learning

Knowledge Transfer and Mentoring.

- Details of Customer requirements on the topics it wants to see covered through transfer and mentoring together with background information on the skill sets of the audience.
- Ensure that facilities and equipment are available to host the informal technical update sessions.