



Service Description: Cisco Network Modeling Service (CON-AS-NM-BLNG)

This document describes the Cisco Network Modeling Service for IP/MPLS networks.

Related Documents: This document should be read in conjunction with the following documents also posted at <http://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.

Sale via Cisco Authorized Reseller. If you have purchased these Services through a Cisco Authorized Reseller, this document is for description purposes only; is not a contract between you and Cisco. The contract, if any, governing the provision of this Service will be the one between you and your Cisco Authorized Reseller. Your Cisco Authorized Reseller should provide this document to you, or you can obtain a copy of this and other Cisco service descriptions at <http://www.cisco.com/go/servicedescriptions/>.

This Network Modeling Service is intended to supplement a current support agreement for Cisco products such as Cisco's Smart Net Total Care, Limited Lifetime Warranty, Cisco Software Support Service (SWSS), or the Partner Support Service offering from within the Cisco Services Partner Program. Where available, Cisco shall provide the Network Modeling Service 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 Network Modeling Service

Service Summary

Cisco Network Modeling Service is a subscription service for network behavioral modeling, failure and change impact analysis and capacity planning and is comprised of the following:

- Topology and Network Behavioral Model
- Failure and What-if Scenario Change Impact Analysis
- Custom Capacity Planning
- Ongoing Service and Project Management Support

The detailed description of these deliverables is provided below.

Cisco Responsibilities

Cisco's Network Modeling Service consists of the provision of Services described below, where available which Cisco shall provide for the Customer's Network during Normal Business Hours (unless stated otherwise). Services provided by Cisco are remotely delivered unless otherwise noted. Cisco shall provide the following General Support provisions for all Services selected by Customer:

General Support

Cisco shall provide the following general support for all network segments selected by the Customer under the Cisco Network Modeling Service offering:

- Designate an engineer ("Network Consulting Engineer") to act as the primary interface with the customer, along with a Cisco project manager appointed for the Customer
- Designate engineer(s), as needed, to work with the Cisco project manager and the primary Network Consulting Engineer
- Participate in regular meetings with the Customer as required by the project manager-both via phone or in-person quarterly and via phone weekly/bi-weekly/monthly based on customer request to review network modeling recommendations, contracted

deliverables and activities, and to plan for next quarter. In person visits not to exceed four (4) on-site visits annually with an aggregate of eight (8) days. Additional visits will be mutually agreed at Cisco's then-current travel and labor rates.

- Consult with Customer networking staff in a series of meetings to develop a thorough understanding of Customer's Network design and implementation, with a focus on concerns such as resiliency, self-recovery, scalability, disaster recovery, business continuance, virtualization, application traffic requirements, and ability to handle increased traffic demands and prioritization via quality-of-service ("QoS")
- Participate in periodic conference calls to review Customer's Network status, planning and the Services being provided.
- Monitor a Customer-specific Cisco email alias to facilitate communication with a Cisco-designated Services team
- Network Consulting Engineer may utilize Customer provided data, scripts or internal tools to assist in collecting data from the Network.
- Collect relevant network data (such as traffic metrics, QoS policies, device configuration & statistics, and system logs) to proactively analyze and identify potentially service-impacting issues.
- Establish production connectivity between the customer network and the Cisco data center location using a secure VPN. Details to be worked between the customer and Cisco prior to go-live.
- Complete other startup activities as determined by teams during startup process to successfully collect relevant data from customer network, build topology models, and analyze network behavior.
- For any 3rd party devices and technologies included within the scope of the service quote, Cisco shall perform the capacity modeling and analysis, and provide high-level optimization recommendations. Should further analysis of potential service impacting issues on these devices be required, customer shall work with 3rd party support team for resolution.
- Designate at least two (2) but not more than six (6) technical representatives, who must be Customer's employees in a network engineer or administrator role, to act as the primary technical interface to the Cisco designated 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 under this Service Description (e.g., chair the weekly conference calls, assist with prioritization of projects and activities).
- Ensure key engineering, networking and operational personnel are available to participate in interview sessions and review reports as required by Cisco in support of Service.
- Customer's technical assistance center shall maintain centralized network and 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 designated engineer to provide support.
- Customer agrees to make its production, and if applicable, test Network environment available for installation of Data Collection Tools. Customer shall ensure that Cisco has all relevant Product information needed for an assessment.
- Customer agrees to provide:
 - Required device access for all products in scope including, SNMP, CLI (SSH/Telnet), and when applicable NetFlow access.
 - IP addresses for seed devices required for collection
- 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

Customer Responsibilities

General Support

Customer shall comply with the following obligations:

needed. Customer shall remain responsible for any damage to or loss or theft of the Data Collection Tools while in Customer's custody. If Cisco provides the hardware and software for customer onsite use, the customer shall remain responsible for any damage to or loss or theft while in possession.

- Notify Cisco immediately of any major network changes (e.g.; topology; configuration; new IOS releases; moves, adds, changes and deletes of devices).
- In the event the Network composition is altered, after this Service Description is in effect, 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.
- Retain overall responsibility for any business process impact and any process change implementations.
- Supply the workplace policies, conditions and environment in effect at the Customer's facility.
- Provide proper security clearances and/or escorts as required to access the Customer's facility.
- Customer agrees that it will not hire a current or former employee of Cisco, who is involved in the Services under this Service Description, during the term of the Service and for a period of one (1) year after the termination of the Service. As liquidated damages, and not as a penalty, should Customer hire a current or former Cisco employee who is involved in the Services under this Service Description, Customer shall pay to Cisco three (3) times the annual compensation of such employee on the date the employee is hired. If payment is not made on such date, the liquidated damage payment shall be six (6) times the annual compensation of such employee.

In addition to the General Responsibilities, Cisco and the Customer each shall comply with obligations as required for the specific services.

Topology and Network Behavioral Model (OPT-NM-NOS-TBM)

Cisco Responsibilities

Cisco will consult with Customer via a series of meetings to create a network availability and resiliency model by analyzing the core infrastructure that support mission critical applications and services. The service models current operational state. A Network Topology and Behavioral Modeling includes, among other information, the following:

- Network Topology Representation
 - Custom Plan File Tags – Site Hierarchy, Circuit Type etc.
 - Network/ Plan File Review – IGP, BGP, LSP, QOS, L3 VPN, Resiliency, Layer 1 (SRLG and Cost)
 - Transit – BGP MAC Address Accounting and NetFlow Import
 - Custom Network Visuals –BGP Peering, IGP, LSP etc.
- Network Behavioral Modeling
 - Build network models for IP technologies configured in the network such as OSPF, IS-IS, QoS, MPLS, Multicast, and BGP.
 - Simulate traffic profiles for relevant services based on data collected from the network

Customer Responsibilities

- Review the analysis and recommendations outputs and provide input and feedback on the validity of the model.

Deliverable

- Network Model

Failure and What-if Scenario Change Impact Analysis (OPT-NW-NOS-FICA)

Cisco Responsibilities

Network failure and Change impact analysis to assess network's ability to support current traffic loads and handle potential network failure conditions. Main activities in this deliverable include:

- Identify and analyze areas of suboptimal design such as single (or multiple) points of failure (e.g. link, node, SRLG etc.), worst-case scenarios, under/over-utilized links etc.
- Perform (1 per quarter) what-if scenario change impact analysis. Analyze the impact of potential network changes/failures on service performance and availability. (Not included major topology or network architecture changes.)
- Provide actionable design and capacity recommendations to improve network resiliency and meet service performance objectives.

Customer Responsibilities

- Review recommendations outputs and provide input and feedback on the recommendations.

Deliverable

- Recommendations Report

Custom Capacity Planning (OPT-NM-NOS-CCP)**Cisco Responsibilities**

Assess network's readiness to support future traffic growth or business initiatives such as new service roll out, application migration, amongst other items.

- Understand relevant business growth objectives and future traffic loads that could have potential impact on network performance
- Analyze the impact of changes in traffic profiles or potential design options on capacity utilization and impact on service performance.
- Provide Capacity Planning recommendations to support future business needs while optimizing capacity investments and accelerate time to market.
- Perform Analysis and reporting (customer can select one of the following reports per quarter)
 - Capacity Forecasting
 - Perform cost-analysis
 - Perform ROI-Study
 - Network Integration Impact Report

Customer Responsibilities

- Review Capacity Plan and provide input and feedback on the recommendations.
- Ensure that key Customer stakeholders and project sponsors are available to attend Cisco's presentation and review of the plan

Deliverable

- Capacity Plan Document

Ongoing Service and Project Management Support (OPT-NW-NOS-OSPMS)**Cisco Responsibilities:**

- Provide ongoing support and project management to assist with the overall delivery of the Network Modeling Service.

- Schedule with Customer up to four (4) quarterly meetings per year (not to exceed eight (8) days) to review deliverables and activities and plan for the next quarter. Additional visits will be mutually agreed upon at Cisco's then-current travel and labor rates.

Customer Responsibilities:

- Designate one individual, who is a senior member of management or technical staff as Customer's primary point of contact to manage the implementation of services under this Service Description (e.g., chair the conference calls, assist with prioritization of projects and activities). Provide its designated person(s) with instructions on process and procedure to engage the Advanced Services Engineer.

Deliverable

- Quarterly Project Report