Service Description: Data Center SAN Health Check Service

This document describes Cisco's Data Center SAN Health Check 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.

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 www.cisco.com/go/servicedescriptions/.

Cisco shall provide the Data SAN Health Check 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.

Data Center SAN Health Check Service

Service Summary

The SAN Health Check Service includes a SAN Assessment addressing the base MDS Featureset and then optional offerings addressing Fabric Manager Server, SAN applications and advanced features.

The following technologies are supported under this Service Description:

- SAN Products: MDS platform 9000, 9100,9216,9500; Fabric Manager Server

Cisco's Data Center SAN Health Check Service consists of the provision of, at a minimum, the Base MDS Featureset, from the Services described below, which Cisco shall provide for during Standard Business Hours (unless stated otherwise). Cisco will also provide any of the options noted below as selected and detailed on the Purchase Order provided by Customer.

SAN Assessment of Basic Features

Base MDS Featureset (Required)

- Cisco will provide assessment which covers analysis of the features and abilities of the MDS platform for optimal deployment and configuration for those that do not require additional licensing. Major areas include:

  - Switch Management:
    - Security (AAA)
    - Event Notification (CallHome, Syslog, SNMP)
    - Scheduler and Configuration Maintenance
  - Device Management:
    - VSANs
    - Zoning
    - DomainID allocation
    - DeviceAliases
  - Topology Management
    - PortChannels
    - Trunking

- Cisco will provide a Health Check Report which includes an executive summary, current status of environment, Customer requirements analysis, findings and conclusions.

Fabric Manager Server (Optional)

- If selected from the SAN Assessment of Basic Features, Cisco will investigate and validate Customer's Fabric Manager Server. Typical activities include:
  - Fabric Manager Server sizing
  - Application optimization
  - Access control & Security
  - Reporting
  - Backing up the Fabric Manager Server

- Cisco will provide a Health Check Report which includes an executive summary, current status of

environment, Customer requirements analysis, findings and conclusions.

Assessment of SAN Applications (Optional). Under this optional assessment of SAN applications, Cisco will provide the following assessments:

Data Migration Manager (Optional)

- Cisco will gather requirements in order to perform the assessment.

- Assessment includes:

  o Determine ideal locations to insert DMM
  o Identify migration bottlenecks
  o Optimize DMM configuration and strategy
  o Identify appropriate DMM method for the Customer's requirements

- Cisco will provide a Health Check Report, based on Customer's stated requirements, which includes an executive summary, current status of environment, Customer requirements, analysis, Cisco's findings and conclusions.

Storage Media Encryption (Optional)

- Cisco will gather requirements in order to perform assessment.

- Assessment includes:

  o Evaluate key management strategy
  o Determine ideal locations for encryption engines
  o Compare subject matter expert (SME) configuration against Cisco and industry best practices

- Cisco will provide a Health Check Report, based on Customer's stated requirements, which includes an executive summary, current status of environment, Customer requirements, analysis, Cisco's findings and conclusions.

SAN Assessment of Advanced Features (Optional). Under this optional assessment of SAN advanced features, Cisco will provide the following assessments:

Enterprise Package (Optional)

- Cisco will gather operational, business and technical requirements for the SAN.

- Cisco will analyze the licensable advanced traffic engineering and security features of the MDS platform including those listed below. Additionally, Cisco will gather and review configurations against Cisco best practices.

  o Traffic Engineering:
    o InterVSAN Routing
    o Quality of Service
    o IP Security (IPsec)
    o LUN or Read-Only Zoning
    o FibreChannel Write Acceleration
  o Security:
    o FC-SP Authentication
    o DH-CHAP Authentication
    o Port-Security
    o VSAN Based Access Control
    o Fabric Binding for Open Systems

- Cisco will provide Health Check Report, based on Customer's stated requirements, which includes an executive summary, current status of environment, Customer requirements, analysis, Cisco's findings and conclusions

Mainframe Package (Optional)

- Cisco will gather operational, business and technical requirements for the SAN.

- Cisco will analyze FICON implemented features to support Customer mainframe environment including items listed below. Cisco will also collect and review configurations against Cisco best practices

  o FICON based VSANs
  o Port-Channel and ISL load-balancing for FICON flows
  o FICON Control Unit Port (CUP)
  o Fabric Binding
  o Switch Cascading
  o IPL File Usage
  o FICON Port Number Assignment

- Cisco will provide Health Check Report, based on Customer's stated requirements, which includes an executive summary, current status of environment, Customer requirements, analysis, Cisco's findings and conclusions

SAN Extension Package (Optional)

- Cisco will gather operational, business and technical requirements for the SAN.

- Cisco will review FCIP functionality to extend SAN to multiple datacenters and/or implementation of disaster recovery or replication environments. This would typically include:

  o FCIP Design Optimization
  o FCIP Tunnel Performance Optimization
  o Write and Tape Acceleration
  o Inter-VSAN Routing (IVR) over FCIP

- Cisco will provide a Health Check Report which includes an executive summary, current status of environment, Customer requirements analysis, findings and conclusions.

Service Responsibilities of Customer

Customer shall comply with the following obligations:

- Customer shall designate a person to whom all Cisco communications may be addressed and who has the authority to act on all aspects of the Services.

- Customer shall provide reasonable access to computer equipment, facilities, work space and telephone for Cisco's use during the Service.

- Unless otherwise agreed to by the parties, Customer shall respond within two (2) business days of Cisco's request for documentation or information needed for the Service.

- Customer shall ensure that contracts with its own vendors and third parties are fully executed and reflect the correct terms to enable Customer's business requirements to be met in full. In Addition, Customer shall be responsible for all payments to, and the work performance of, all non-Cisco entities assigned to, or working on this Service under this Service Description.

- Customer acknowledges that Cisco's obligation is to only provide assistance to Customer with respect to the tasks detailed in this Service Description, and that such assistance may not result in some or all of the tasks being completed.

- Customer acknowledges that Cisco is providing Services to assist Customer in support of the initiatives and activities described herein and shall not assume any cost or schedule liability. Customer is the governing authority of all activities and project directives and retains full responsibility for the leadership, review, and approval of actions taken and deliverables completed by Cisco in support of Customer.

- Customer must qualify the Wide Area Application Services (WAAS) configuration prior to Cisco's verification of compliance of Customer's link to the configuration. Customer or the replication application vendor, as applicable, must set the parameters under which the replication application is certified.

- Customer acknowledges that Cisco does not contain a service under this Service Description whereby Cisco provides a traffic generator and analyzer, collects information, and produces an assessment.