



## Service Description: Service Provider Video Optimization Service

This document describes Cisco's Service Provider Video Optimization Service.

**Related Documents:** This document should be read in conjunction with the following documents also posted at [www.cisco.com/go/service-descriptions/](http://www.cisco.com/go/service-descriptions/) (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.

### Service Provider Video Optimization Service

The Service Provider Video Optimization Services are comparable to those services performed under Cisco's [Foundation Technology Service Provider Optimization Service](#), and will build upon the original service support, but will be focused on the Service Provider's Video specific system(s)/technology(ies) described in this Service Description. Availability of Services described herein and service delivery may vary by geographical region.

Cisco shall provide the SP Video Optimization Services during Standard Business Hours and remotely unless stated otherwise.

The SP Video Optimization Services are an advising and consulting offering to assist Video-Service Provider Customer's manage and optimize their currently installed and deployed Video Solution.

#### General Cisco Responsibilities

- Designate a lead engineer ("Network Consulting Engineer") to act as the primary interface with the Cisco project manager appointed for the Customer
- Designate additional engineer(s) as appropriate to work with the Cisco project manager and the primary Service Provider Network Consulting Engineer
- Schedule with Customer up to four (4) quarterly visits per year (not to exceed eight (8) days in aggregate) to Customer's site 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
- Participate in periodic conference calls (usually weekly) to review Customer's Network status, planning and the Services being provided
- Make collaboration tools available for hosting meetings, managing documentation, instant messaging, desktop sharing, and collaborative spaces.
- Establish a Customer-specific Cisco email alias to facilitate communication with Advanced Services Engineer.
- Provide certain Data Collection Tools Cisco identifies as appropriate for Network data collection during the Term of the Services, provided that all fees due and owing to Cisco under this Service Description have been paid. Data Collection Tools may or may not include hardware or software. Customer acknowledges and agrees Cisco shall retain full right, title, and interest to the Data Collection Tools. In addition to Cisco provided tools, the Advanced Services Engineer may utilize Customer provided data, scripts, or internal tools to assist in collecting data from the Customer Network.

The quantity of any reporting and efforts for ongoing activities described herein will vary depending on Customer requirements and what Customer and Cisco mutually agree upon when Services are purchased as identified in the Quote provided by Cisco.

#### General Customer Responsibilities

- Designate at least one (1) technical representative in each area covered under Service Provider Video, who must be a Customer employee in a Video Network support center (Customer's technical assistance center), to act as the primary technical interface to the Cisco 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).
- Provide the Customers technical representative with instructions on process and procedure to engage the Cisco Network Consulting Engineer.
- 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 Network Consulting Engineer to provide support and collect engagement data.

- 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(s) 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 Video Network topology map, configuration information, and information of new features being implemented as needed.
- Notify Cisco Network Consulting Engineer of any major Video Network changes (e.g., topology, configuration, new IOS software releases).
- In the event the Video 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 (10) days 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 Network Consulting Engineer.
- Retain overall responsibility for any business process impact and any process change implementations.

### Service Summary

Cisco shall provide the SP Video Optimization 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 upon between the parties and that, additionally, acknowledges and agrees to the terms contained therein.

The Service Provider Video Optimization service provides Service Providers Network support staff for one or more of the following end-to-end Video Solutions.

- Broadcast Video: such as QAM based broadcast and Switch Digital Video (SDV).
- Video On Demand: QAM based VOD such as CDN and TSTV
- IP Video: such as cDVR, Linear Video (e.g Broadcast Video) and OTT
- IP Video On Demand: IP based VOD delivery to managed and unmanaged devices

The products within the solutions may include but not limited to the following.

- Origination: PowerVu, Receiver, Encoder, ROSA,
- Acquisition: DCM, Cisco Anyres VOD, AMS/CMS, DCM-MFP, Cisco AnyRes Packager, Xcoders, encapsulators, CAL, Asset Management system (AMS/CMS)
- Distribution: ASR-9k, VDS-TV, Vault Storage, Streamer, Video Recorder, Caching gateway, Video Manager, VDS-IS, VDS-TC, Service Router
- Control Plane: DNCS, ECS, EC, DTACS, Cisco VBO, Control Suite/UHE, Video Manager
- Access: RFGW-1, RFGW-10, CMTS, CCAP, 3<sup>rd</sup> party QAM, Netcrypt, IP, QPSK, CMTS-DOCSIS 3.0, ASR-9k, VG CA/DRM, HFC network
- End-user: Vantage, EPG, Client App, framework, Client, Abstraction layer. uDTA, QAM STB, IP Managed Devices, IP/Hybrid STB, Residential GW

The Service Provider Optimization Service includes service areas of:

### Operational Assessment:

Video Operational Efficiency Analysis  
 End-user Video Availability Analysis  
 Access Network Analysis  
 Baseline Video Operations and Network Optimization Analysis

### Network Health Check:

Video Data Center Configuration Analysis  
 Video Management System Configuration Analysis  
 Video Core Transport Infrastructure Configuration Analysis  
 Video Access Network Configuration Analysis  
 Video Data Center Audit and Recommendations  
 Video Management System Audit and Recommendations  
 Video Core Transport Infrastructure Audit and Recommendations  
 Video Access Network Audit and Recommendations

### Network Support:

Scheduled Change Support  
 Unscheduled Change Support  
 Implementation Plan Review (site)  
 Onsite Support  
 Detailed Design Report  
 Ongoing Design Consultation  
 Software Strategy Report  
 Security Alert

### Continuous Learning:

Knowledge Transfer and Mentoring Session

## Program Management

Account Kickoff  
 Weekly Conference Call  
 Prepare and Present QBR  
 90 Day Planning

## Operational Assessments

The SP Video Operational Assessment identifies the operational support activities and process required to manage video network. The Operational Assessments focus on Video Operational Efficiency Analysis, Network Availability Analysis, and Access Network Analysis.

### o Video Operational Efficiency Analysis (OPT-SPVID OPA VOEA):

#### Cisco Responsibilities

The Video Operational Efficiency Analysis focuses on in-depth analysis of Incident management, problem management, service level management, service desk and staffing and education. The goal is to improve process and tools efficiency by focusing on mutually agreed upon metrics around a reduction in service calls and truck rolls while targeting a positive end-user customer experience

- Review Inventory management processes for all managed Video CPE types (up to 2 warehouse locations)
- Review configuration management process and Video solution Hardware/Software matrix
- Provide support to resolve persistent call center (up to 1 call center) operations issues including, monitor and document customer trouble calls, determine current skills and knowledge related to troubleshooting, connections, settings, and customer support. Analyze and document billing system tasks and current processes in place.
- Review service package strategy. Document and analyze all service operations, channel line-ups and system capabilities
- Review, document and analyze the current Customer installation procedures, connectivity, capabilities, configurations and customer education. Perform gap analysis related to installation and customer premise troubleshooting while working with Installers/Service Technician/Access Network Maintenance
- Review, document and analyze operations while focusing on infrastructure installation, organizational support and service interruption/outage detection, monitoring and tracking TAC cases.
- Review training strategy that has been implemented. Assess training program and perform gap analysis of training requirements

**Deliverable:** SP Video Operational Analysis Review Report with results/findings and recommendations for next steps

#### Customer Responsibilities

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

- Provide key decision-makers list and ensure their availability to participate during the course of the service.
- Provide name(s) of Customer personnel for each functional area (call center, technical operations, dispatch, warehouse, retail counter, marketing, billing system/reporting) to participate during the course of the Service (to provide information and to participate in review sessions).
- Provide requested data/metrics at designated intervals as agreed to by Cisco and Customer such as call history, reliability metrics, monthly customer activity reports, service call rate statistics, PPV/VOD metrics, call center call statistics.
- Provide documented information on code definitions: service call problem/solution codes (or equivalent), call center coding, technician fix codes
- Provide within two (2) Business Days of Cisco's request for any other documentation or information needed to provide the Service unless otherwise agreed to by Cisco and Customer
- Provide written documentation for expected standard operating processes for each functional area or verbal if equivalent written documentation does not exist.
- Provide an onsite worksite (such as conference room or empty office) for Cisco associate(s) for period of onsite portion of engagement. Worksite should include internet access
- Review draft report provided by Cisco

### o End-user Video Availability Analysis (OPT-SPVID OPA NAA):

#### Cisco Responsibilities

Assess the foundation of the Video system as it relates to support interactive applications or network readiness

- Baseline the current network availability of managed Video CPE.
- Define the universe of managed Video CPE that should have two-way communications as defined by billing.
- Obtain data from selected managed Video CPE over a defined period of time
- Calculate the non-responder rate by network element.
- Analyze managed Video CPE link availability over a defined period of time
- Recommend changes to improve availability of End-user Video.

**Deliverable:** End-user SP Video Availability Analysis report with results/findings and recommendations for next steps

#### Customer Responsibilities

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

- Provide threshold requirements for Video CPE connectivity, and other performance data as agreed upon by Cisco and Customer

- Provide within two (2) Business Days of Cisco's request for any other documentation or information needed to provide the Service unless otherwise agreed to by Cisco and Customer
- Provide written documentation for expected standard operating processes for each functional area or verbal if equivalent written documentation does not exist
- Review draft report provided by Cisco

#### ○ **Access Network Analysis (OPT-SPVID RNA):**

##### **Cisco Responsibilities**

Provide Access Network Analysis to localize issues on identified elements of Customer access network as agreed upon between Customer and Cisco.

- Cisco will perform inside plant and outside plant inspection on Access Network elements, such as RFGW-1, RFGW-10 and HFC network devices.
- Inspect Access Network elements for correct operating outputs
- Inspect Customer premise end of lines (EOL's) network access element

**Deliverable:** SP Video Access Network Analysis report with results/findings and recommendations for next steps

##### **Customer Responsibilities**

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

- Ensure key Customer personnel such as: architecture design and planning, network engineering, network operations staff are available to participate during the course of the Service to provide information and to participate in review sessions.
- Provide necessary access to plant and devices to perform the service
- Provide documented business and technical requirements and high-level network architecture design specification.
- Provide Customer's existing video network infrastructure design such as features and functionality, route plans, addressing schema, security policies, Network management and operational processes.
- Provide within two (2) Business Days of Cisco's request for any other documentation or information needed to provide the Service unless otherwise agreed upon by the Cisco and Customer
- Review draft report provided by Cisco

#### ○ **Baseline Video Operations and Network Optimization Analysis (OPT-SPVID OPA BVNA):**

##### **Cisco Responsibilities**

Provide a high-level summary of the Video Operational Efficiency Analysis, Network Availability Analysis, Video Data Center Analysis and the Access Network Analysis (RF or DOCSIS enabled IP channels). This service offering is based primarily on data analysis, which includes but is not limited to

provide video operators an overview of potential contributors to service interruptions, unnecessary truck rolls, controllable expenses, and process/procedure breakdowns.

**Deliverable:** SP Video Operations and Network Optimization Analysis report with results/findings and recommendations for next steps

##### **Customer Responsibilities**

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

- Provide documented information on Code Definitions such as service call problem/solution codes (or equivalent), call center coding, technician fix codes and Customer's existing Video network infrastructure design such as: features and functionality, route plans, addressing schema, security policies. Network management and operational processes.
- Provide other required data at designated intervals as agreed to by Cisco and Customer to perform Service.
- Provide within two (2) Business Days of Cisco's request for any other documentation or information needed to provide the Service unless agreed to by the Cisco and Customer
- Provide an onsite worksite (such as conference room or empty office) for Cisco engineer(s) for period of onsite portion of engagement. Worksite should include Internet access.
- Review draft report provided by Cisco

##### **Network Health Check**

Video Network Health Check covers Configuration Analysis, Audits and Recommendations for end-to-end Customer video network.

##### **Configuration Analysis**

The Configuration Analysis involves several areas such as Customer's Operations, Video Data Center, Core Transport Infrastructure, Access Network, Hardware, Software versions, and Application-Specific configuration based upon adherence to Cisco leading practices for Video Solution deployments. The process will identify deficiencies and potential risks within the system(s) that should be resolved to reach a stable environment based on Cisco and industry best practices and known working models.

The Configuration Analysis is available for the one or more of the following:

- Video Data Center
- Video Management System
- Video Core Transport Infrastructure
- Video Access Network

##### **Cisco Responsibilities**

- **Video Data Center Configuration Analysis (OPT-SPVID NHC VDCR):**

Video Data Center Configuration Analysis will cover the traditional headend and Video components as agreed upon by Cisco and Customer. Examples include but are not limited to, video data center components such as IRDs, MPEG encoders, multiplexers, bulk encryptors, conditional access systems, VOD servers, SDV servers, VOD vaults, DRM systems, content delivery engines, content delivery applications etc. Configuration analysis will check the following:

- Verify HW and SW versions and HW configuration details of identified components.
- Verify that the system management and access restrictions are at the desired levels.
- Verify hardware, software and protocol configuration and optimize the video content processing and performance
- Verify that the systems are configured to optimize the component redundancy and service availability
- Provide the recommendations to optimize the configuration of the video data center

**Deliverable:** Configuration Analysis and Recommendation report to optimize the configuration of the video data center

#### ○ **Video Management System Configuration Analysis (OPT-SPVID NHC OSCR):**

Video Management System configuration analysis includes devices that manage Video and back-office components as agreed upon by Cisco and Customer.

- Verify HW and SW versions and HW configuration details of identified components.
- Verify the fault management capabilities of Customers Video Solution
- Verify the performance management capabilities of Customers Video solutions
- Verify the current billing and data collection capabilities.
- Provide the recommendation to optimize the configuration of Video management systems.

**Deliverable:** Configuration Analysis and Recommendation report to optimize the configuration of the Video management systems

#### ○ **Video Core Transport Infrastructure Configuration Analysis (OPT-SPVID NHC VTIC):**

Video Core Transport Infrastructure Configuration analysis covers optical transport nodes, IOS and IOS-XR based routers and switches as agreed upon by Cisco and Customer.

- Verify HW and SW versions and HW configuration details of identified components.
- Verify that the systems are configured to optimize the video content forwarding performance
- Verify that the system management and access restrictions at the desired levels
- Verify that the systems are configured to optimize the component redundancy and service availability

- Provide the recommendation to optimize the configuration of Video Core Transport Infrastructure

**Deliverable:** Configuration Analysis and Recommendation report to optimize Video Core Transport Infrastructure

#### ○ **Video Access Network Configuration Analysis (OPT-SPVID NHC VIAR):**

A Video Access Network configuration analysis covers components such as Video QAMs, and subscriber network aggregation systems as agreed upon by Cisco and Customer.

- Verify HW and SW versions and HW configuration details of identified components.
- Verify that the system management and access restrictions at the desired levels
- Verify that the systems are configured to optimize the video content processing performance
- Verify that the systems are configured to optimize the component redundancy and service availability
- Provide the recommendation to optimize the configuration of Video Access Network

**Deliverable:** Configuration Analysis and Recommendation report to optimize the configuration of the Video Access Network

#### **Customer Responsibilities**

This section covers Customer Responsibilities for Configuration Analysis, which includes:

- Video Data Center
- Video Management System
- Video Core Transport Infrastructure
- Video Access Network

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

- Provide key decision-makers list and ensure their availability to participate during the course of the service
- Provide access to inventory and documented network information, approved diagnostic equipment connections, and any other data collection as agreed to by Customer and Cisco
- Provide information on existing stability issues, and recent network outages.
- Provide approval and necessary assistance to deploy Cisco and/or third-party tools for network discovery, and inventory data gathering as agreed to by Cisco and Customer.
- Provide security exemption to utilize any Cisco or third-party software on their network for the use of data inventory gathering, performance.
- Provide Information on critical applications supported by the Network
- Perform necessary code upgrades as recommended by Cisco on Customer devices.

- Assist Cisco to perform Video devices configuration as needed.

### Audits and Recommendations

Cisco will provide the scoped number of technology audit reports or other performance analysis reports. The Audits can be performed for:

- Video Data Center
- Video Management System
- Video Core Transport Infrastructure
- Video Access Network

#### Cisco responsibilities

#### ○ Video Data Center Audit and Recommendations (OPT-SPVID NHC VDAR):

The Video Data Center Audit and Recommendation looks for fault, performance and capacity management, which are directly related to the stability, availability and efficiency of the video service. Video Data Center Audit and Recommendation covers traditional headend and video data center components as agreed upon by Cisco and Customer.

- Verify environmental conditions for identified components such as power supply voltage, temperature etc.
- Verify identified data center systems, have applicable component level and service level redundancy in place.
- Collect performance and error statistics per interfaces and ports, system level and port level alarms, applicable logs etc. for identified data center hardware component.
- Collect disk storage usage statistics for identified data center hardware component.
- Collect relevant statistics data at designated intervals as agreed to by Cisco and Customer.
- Evaluate bandwidth utilization and bottlenecks, network load (scalability), and system maintenance
- Evaluate connectivity of identified data center components of headend and hub
- Provide recommendations to address Video Data Center challenges.

**Deliverable:** Video Data Center Audit and Recommendation report.

#### ○ Video Management System Audit and Recommendations (OPT-SPVID NHC OSAR):

The Video Management System Audit typically looks for performance, stability and availability of the management systems. The Video Management System Audit covers components as agreed upon by Cisco and Customer.

- Verify application level performance data for identified management applications such as provisioning systems, network management systems etc such as VOD performance and billing system performance.
- Verify redundancy for identified applications and hardware

- Analyze identified management server(s) system logs and other relevant fault and error data such as system CPU, memory utilization, and hard disk usage statistics at designated intervals as agreed to by Cisco and Customer.
- Provide recommendations to address Video Management system challenges.

**Deliverable:** Video Management System Audit and Recommendation report.

#### ○ Video Core Transport Infrastructure Audit and Recommendations (OPT-SPVID NHC VTIA):

The Video Core Transport Infrastructure Audit captures exception events, counters, leading practices and values indicating problems that reduce the availability and stability of Video in the network. This provides a baseline for validating delivery of Video across identified core infrastructure, routing, and access technology components as agreed upon by Cisco and Customer

- Verify environmental conditions for the identified core components such as power supply, voltage temperature etc
- Collect performance and error statistics per interfaces and ports, system level and port level alarms, applicable logs etc. for identified core transport hardware component.
- Verify that the systems are configured to optimize the component redundancy and service availability
- Collect relevant statistics data at designated intervals as agreed to by Cisco and Customer
- Provide recommendations to address Video Core Transport Infrastructure System challenges.

**Deliverable:** Video Core Transport Infrastructure System Audit and Recommendation report.

#### ○ Video Access Network Audit and Recommendations (OPT-SPVID NHC VIAA):

The Video Access Network Audit and Recommendation covers Access network technologies such GQAM, RFGW and Video CPE as agreed upon by Cisco and Customer

- Verify environmental conditions for identified access network components such as power supply, voltage temperature etc.
- Collect the available performance and error statistics for identified interfaces and ports, system level and port level alarms, applicable logs for access components
- Collect relevant statistics data at designated intervals as agreed to by Cisco and Customer.
- Verify system hardware level and service level redundancy, stability and availability of identified access components
- Analyze Video CPE availability and performance for identified Access Network components
- Provide recommendations to address Video Access Network challenges.

**Deliverable:** Video Access Network System Audit and Recommendation report.

### Customer Responsibilities

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

- Provide key decision-makers list and ensure their availability to participate during the course of the service
- Provide a list of participants to be interviewed by Cisco regarding the audit, Customer should provide their job title and responsibility within the organization
- Provide approval and necessary assistance to deploy Cisco and/or third-party tools for network discovery, and inventory data gathering as agreed to by Cisco and Customer.
- Provide security exemption to utilize any Cisco or third-party software on their network for the use of data inventory gathering, performance.
- Provide information on critical applications supported by the Network
- Provide information on Customer's plans for business continuance, consolidation, and virtualization
- Provide information on any future advanced technology implementations, expected Network growth and application mix changes
- Provide access to inventory and documented network information such as Video network topology diagram, approved diagnostic equipment connections, and any other data collection as agreed to by Cisco and Customer.
- Provide information on Provide information on any service level agreements or Network performance requirements
- Provide information on existing stability issues, and recent network outages

### Network Support

#### ○ Scheduled Change Support (OPT-SPVID NS SCS):

##### Cisco Responsibilities

Cisco will provide Customer with remote resource(s) to support critical scheduled changes. The number of events will vary depending on the size of Customers Video Solution installed base and activities. This may include:

- Collaborate with Customer to evaluate the design and potential impact of the proposed scheduled change, review documented implementation and rollback procedures.
- Provide Schedule Change Support remote resource(s) during Customer scheduled maintenance window(s) as agreed upon by Customer and Cisco.
- Review Customer's change support documentation and provide recommendations

**Deliverable:** Recommendation report of implementation documentation provided by Customer and potential impact

### Customer Responsibilities

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

- Provide designated person(s) from technical support organization to serve as liaison to the Cisco Network Consulting Engineer.
- Provide information and documentation of Customer change control process(es).
- Provide information and documentation of Customer escalation process(es) including contact information.
- Provide information and documentation of maintenance window dates, times and locations including any restraints.
- Identify low risk and high-risk areas of impact to the subscriber base supported by the Customers Video Solution.
- Provide information and documentation of architecture (which may include remote sites and size of remote sites).
- Provide information and documentation of Customer implementation plan and deployment schedule.
- Provide all necessary information to enable Cisco to perform root cause analysis (RCA) in case of scheduled change failure.

#### ○ Unscheduled Change Support (OPT-SPVID NS UCS):

##### Cisco Responsibilities

Cisco will provide Customer with remote resource(s) to support any unscheduled changes to the Video Solution. This may include:

- Designate an engineer ("Cisco Network Consulting Engineer") to provide assistance during Unscheduled Change Support to Cisco Technical Assistance Center (TAC).
- Provide technical assistance of initial TAC problem diagnosis based on knowledge of Customer's Video Solution.
- Provide technical assistance to proposed resolution in support of unscheduled changes to Video Solution.
- Provide technical representation in unscheduled change support conference calls.

##### Customer Responsibilities

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

- Provide designated person(s) from technical support organization to serve as liaison to the Cisco Network Consulting Engineer.
- Open cases with Cisco Technical Assistance Center (Cisco TAC) for all reactive issues.
- Identify low risk and high-risk areas of impact to the subscriber base supported by the Customers Video Solution.
- Provide information and documentation of architecture (which may include remote sites and size of remote sites).

- Provide information and documentation of Customer implementation plan and deployment schedule.
- Provide all necessary information to enable Cisco to perform root cause analysis (RCA) if applicable.

○ **Implementation Plan Review (OPT-SPVID NS IPR):**

**Cisco Responsibilities**

Provide a smooth transition from the Customer's Planning and Design to implementation or expansion of a designed Solution. Cisco will not perform any changes or modifications to Customer environment.

- Provide Customer with a remote subject matter expert(s) to consult on Video Solution implementation.
- Review Customer's Implementation Plan and other pertinent documents for potential gaps, risks or integration issues and provides Cisco best practices around Video Solution implementation.
- Perform limited verification work in a Cisco lab in order to validate questions and recommendations.
- Develop any remediation changes and test in a Cisco lab to verify.
- Assist Customer with assessing and providing recommendations to documentation change control processes.
- Provide consultative support and guidance to Customer in helping Customer understand required changes for remediation.

**Deliverable:** Recommendation report on implementation documentation provided by Customer.

**Customer Responsibilities**

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

- Provide a list of technical engineer, design-architects and decision makers and ensure their availability to participate during the course implementation plan review.
- Provide any information on current and planned Video Solution characteristics or constraints.
- Provide document(s) describing procedures for implementing the Video Solution.
- Assign personnel certified to perform the Video Solutions tasks and any onsite Implementation duties required for implementation for the duration.

○ **Onsite Support (OPT-SPVID NS OS):**

**Cisco Responsibilities**

Onsite Video Optimization Support is only available to certain geographic locations and will be specified in the Quote if provided. Where available, this may include:

- Designate an engineer ("Cisco Network Consulting Engineer") to work onsite at Customer's designated location. Engineer will provide consultative support and

guidance to lead the delivery of the SP Video Optimization Service ordered for its Video Solution.

- Ongoing, onsite support and technical leadership from a local Cisco Advanced Services Engineer available up for to five days per week (pending local work restrictions) during Standard Business Hours excluding Cisco holidays, locally recognized country holidays, vacation, and training days.

**Customer Responsibilities**

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

- Provide Onsite host contact information and procedures for Cisco to access the Customer work environment.
- Provide a designated person(s) and contact information who are skilled, trained resources for the Video Solution support
- Provide governing authority of the Video Solution provided by Cisco and retains full responsibility for the leadership, review and approval of any and all actions taken.
- Provide secure workspace for AS Network Consulting Engineer with necessary network access to internal Video Solution as well as external access, which will support standard VPN connectivity.

○ **Detailed Design Report (OPT-SPVID NS DDR):**

**Cisco Responsibilities**

Provide a reference Detailed Design Report as "blue print" to use as baseline, for seamless and consistent Video Solution deployments.

- Work with Customer to gather high-level business and technical requirements (feature functional and system).
- Create the high-level reference architecture baseline for Video Solution.
- Gather requirements through interviews and relevant documentation reviews to understand current business and technical goals for Video Solution. Focus areas discussed may include but are not limited to Video Solution 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").
- Evaluate the business and technical functional requirements against existing architecture and topology of the Video Solution.
- Evaluate the business and technical functional requirements against existing Video Solution feature/functionality, configuration, protocol selection, devices and software.
- Evaluate security considerations of the Video Solution.
- Provide and Present the Video Solution Detailed Design Report to review findings and recommendations with the Customer.

**Deliverable** Detailed Design Report

**Customer Responsibilities**



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

- Provide access to all Video Solution and Video Transport Network documentation.
- Provide key detailed design stakeholder and decision-makers list and ensure their availability to participate during the course of the service.
- Schedule meeting(s) and/or interview(s) for Cisco to discuss detailed site-specific technical and application inquiries.
- Provide document(s) describing specific business and technical requirements for the design goals. The level of details must be sufficient to be used as input to a design plan.
- Revise and update Customer Acceptance Test and Ongoing support Plan for detailed design as recommended by Cisco.

○ **Ongoing Design Consultation (OPT-SPVID NS DC):**

**Cisco Responsibilities**

Provide ongoing design consultation that assesses the Video Solution architecture for current and changing business goals. The Ongoing Design Consultation focuses on aligning business goals with current and future planning activities, such as introducing new technologies, efficiency or expansion of the Video Solution.

- Review current architecture design, network topology, and any other document requested by Cisco of Customer Video Solution as required to perform service.
- Review the Customer design requirements, priorities and goals.
- Discuss near-term planned changes to Video Solution.
- Discuss impact of changes to existing Video Solution.
- Discuss integration and aggregation points for the Video Solution to be deployed including protocols, security and Network Management Software ("NMS") considerations.
- Analyze gathered documentation and information collected during the Architecture Design Review Session.
- Present findings and recommendations in the Architecture Design Review Session to Customer.

**Deliverable:** Architecture Design Review Report.

**Customer Responsibilities**

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

- Provide access to all Video Solution and Video Transport Network documentation.
- Provide on-site and/or remote access to the Video Solution devices included in the Ongoing Design Consultation.
- Provide key detailed design stakeholder and decision-makers list and ensure their availability to participate during the course of the service.

- Schedule meeting(s) and/or interview(s) for Cisco to discuss detailed site-specific technical and application inquiries.
- Provide document(s) describing specific business and technical requirements and design goals. The level of details must be sufficient to be used as input to a design plan.
- Revise and update Customer Acceptance Test and Ongoing support Plan for detailed design as recommended by Cisco.

○ **Software Strategy Report (OPT-SPVID NS SSR):**

**Cisco Responsibilities**

Cisco Network Consulting Engineer(s) will consult with Customer to provide ongoing software strategy. Software strategy applies to identified sections of Customer network as agreed upon between Cisco and Customer. Software strategy may include, but is not limited to, the following:

- Review of Customer's software strategy business practices, priorities and challenges.
- Review of software release conformance recommendations for Customer's Video Solution.
- Analysis of software compliance and consistency of Customer's Video Solution.
- Analysis of Customer's current practices related to software selection, testing, staging, deployment and troubleshooting of Customer's Video Solution.
- Assist Customer in identifying software bugs to which Customer may be exposed and appropriate work-around if possible.
- Assist Customer in developing processes, procedures and documentation related to establishing and managing software selection, feature requirements, release standards and migration trigger for example software advisories, software deferrals, end of sale, end of life, etc.
- Provide Software/Hardware matrix and Risk Analysis report, identifying findings and recommendations

**Deliverable:** Software/Hardware matrix and Risk Analysis Report

**Customer Responsibilities**

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

- Provide information and documentation on current software releases running in the Video Solution.
- Provide current configuration templates being used in the Video Solution.
- Provide Customer business and technical requirements for new software releases proposed for implementation and use in the Video Solution.
- Provide information and documentation of planned changes to Video Solution and its components, new technology applications, major design changes (short or long term).
- Provide information and documentation of any network infrastructure and transport over which Video Solution

content or administrative traffic traverses, new technology applications, major design changes (short or long term).

- Provide Information and documentation of Customer lab testing and certification processes.
- Provide Information documentation on Customer change control processes.

○ **Security Alert (OPT-SPVID NS SA):**

**Cisco Responsibilities**

Cisco will provide Customer with Cisco's Security Advisories, which may include:

- Notify Customer on affected or potentially affected Video Solution devices
- Analyze how a Cisco Security Advisory may or may not affect Customer's Video Solution
- Recommended Customer actions to mitigate risk

**Deliverable:** Recommendation to mitigate risk

**Customer Responsibilities**

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

- Provide information and documentation of Customer's current software release and hardware version for Video Solution components purchased.
- Provide high-level architectural drawing(s) that show where Video Solution components are located, such as geographical location or location within the network.
- Provide key stakeholder and decision-makers list who will provide review and approval to implement proposed solution(s) or workaround(s) for the Customer's Video Solution issues.
- Provide on-site and/or remote access to Video Solution devices related to the issue.

**Continuous Learning**

○ **Knowledge Transfer and Mentoring Sessions (OPT-SPVID CL KTM):**

**Cisco Responsibilities**

Knowledge Transfer and Mentoring Sessions are informal sessions and may be delivered on-site or remotely in a virtual session. These sessions are defined as closed enrollment sessions delivered to Customer. Each type of session is provided only to Customer students. Cisco will consult with Customer to identify requirements and topics for informal training sessions. Knowledge Transfer and Mentoring Sessions include:

- Provide training relevant to the Cisco products and technologies deployed in Customer's Video Solution.
- Provide a list of prerequisite knowledge for each student attending a session.

- Delivered in English, with other languages subject to availability.
- Delivered on-site or remotely to a maximum number of students per session as mutually agreed to by Cisco and Customer.
- Provide sessions of no more than four (4) hours duration in any one session, no more than 2 sessions per day, and of a total combined length agreed to by Cisco and Customer.
- Delivery will be considered complete upon the completion of the session(s) as evidenced by the session attendance roster provided to Customer.
- Delivered on dates and times as agreed to by Cisco and Customer.

**Customer Responsibilities**

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

- Details of Customer requirements on the topics it wants to see covered through Knowledge Transfer and Mentoring.
- Provide a list of students attending the session(s).
- Agree that all content provided is the sole property of Cisco and is for the exclusive benefit of Customer attendees, for their internal use, and shall not be reproduced or distributed in any way and shall always be subject to both confidentiality and IPR provisions of the service agreement.

**On-site Session(s):**

- Provide for travel and accommodation expenses of Cisco Network Consulting Engineer delivering the session(s).
- Provide enclosed room facilities, such as a conference room, dedicated to the session(s), sufficient table space for each student and the ability for each student to have clear view of any materials presented.
- Provide an SVGA projection system (either a projection Panel combined with an overhead projector, or LCD projector) to be connected to the external monitor port of the laptop of the Cisco Network Consulting Engineer delivering the session(s).
- Provide a minimum of one whiteboard approximately 4 feet by 6 feet (multiple whiteboards are preferred), usable even when the projection system is simultaneously active.
- Provide whiteboard markers and eraser.
- Customer will provide access to the Internet to all students and the Cisco Network Consulting Engineer delivering the session(s), which will support standard VPN protocols.

**Virtual Session(s):**

- Provide connectivity to the Internet for attendees, which allows pass through for Cisco collaboration and presentation tools, such as WebEx and Jabber.
- Provide connectivity to the Internet for attendees, which will support video or Telepresence protocols as required and agreed to by Cisco and Customer.
- Provide connectivity to the Internet for attendees, which supports and allows standard VPN connectivity.

- Provide adequate audio communications for attendees should audio not be supported through Cisco collaboration and presentation tools, such as WebEx and Jabber.
- HFC – Hybrid Fiber Coaxial

## Program Management

### Cisco Responsibilities

Cisco will provide:

- Account Kick-off (OPT-SPVID PM AK)
- Weekly Conference Call (OPT-SPVID PM CC)
- Prepare and Present Quarterly Business Review (OPT-SPVID PM PP)
- 90-Day Planning (OPT-SPVID PM 90)

### Customer Responsibilities

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

- Details of Customer requirements on the program(s) it wants Cisco to manage
- Access to all relevant Customer material, equipment, facilities and personnel required to manage the program(s)

<h2>Acronyms</h2>
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- QAM – Quadrature Amplitude Modulation
- SDV – Switched Digital Video
- VOD – Video On Demand
- cDVR – Cloud Digital Video Recorder
- OTT- Over The Top
- ROSA – Cisco ROSA suite supplies service providers with a complete, powerful solution for the management of digital content delivery platforms
- DCM – Digital Content Manager Platform
- CAV – Cisco AnyRes VOD
- AMS – Asset Management System
- CMS – Cisco Videoscape Media Suite
- MFP - Multi Format Processing
- VDS-TV – Videoscape Distribution Suite for Television
- VDS-IS – Videoscape Distribution Suite for Internet Streaming
- VDS-TC – Video Distribution Suite Transparent Caching
- MOS- Media Origination System
- RFGW – Radio Frequency Gateway
- CMTS – Cable Modem Termination System
- CCAP- Converged Cable Access Platform
- DOCSIS- Data Over Cable Service Interface Specifications
- VG-CA - Videoscape Multi-Conditional Access
- VG-DRM- Videoscape Digital Right Management System
- uDTA – Universal Digital Adapter
- STB – Set Top Box
- EPG – Electronic Program Guide
- GW – Gateway
- ASR-9k – ASR 9000 Aggregation Services Router